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FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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Original Correspondence.

COLLIERY ACCIDENTS—THE GOLYNOS INQUEST.

SIR,—Your recognised willingness to permit of the correction of clerical or other error in your Journal emboldens me to request the favour of insertion for this letter, in order that the discussion, or rather conversation, at the Golynos inquest may be more clearly understood.

The special rules were entirely agreed on and duly sanctioned; but, instead of "not having been properly certified," as your correspondent has it, *they had not been certified at all;* and further than that, they had not even been printed. It is obvious, then, that I could not sign a document that never had existence; these rules had, in fact, but recently been received by the owners from the Home Office, and but a very few days ago they had been committed to the hands of the printers.

I offered at the inquest to certify that the fifth special rule (then lying before us) had become the law of the land; but the coroner adopted the suggestion of future magisterial intervention rather than of an immediate consideration of manslaughter before the Court then sitting. This he did to show that a fellow-creature must not be deprived of life without investigation; and that if the case cannot be recognised by one tribunal, another exists possessing power to entertain it. I have no doubt but that the proprietors will promptly follow the advice they received.

Clifton, June 10. LIONEL BROUGH.

SURVEYING IN MINES BY THE MAGNETIC NEEDLE.

SIR,—On Thursday last, June 6, I made several experiments with surveying instruments in a coal mine near Glasgow, for the purpose of ascertaining to what extent the magnetic needles of surveying instruments may be disturbed by local magnetic influences, proceeding from cages, pumps, and tram-plates. I had two surveying dials, a circumferentor, and a small sensitive needle in a pocket instrument with me, so that I might have an opportunity of observing how different needles would be affected by the same magnetic force when operating upon the needles placed alternately in the same positions. The place of experiment was in a seam of coal several fathoms up from the bottom of the pit, and in a level passage about 5 ft. high and 5 or 6 ft. wide, containing a tramway of ordinary cast-iron, Curr's tram-plates. The cage, weighing about 8 cwts., consisted of malleable iron-bars, with a cover of sheet-plate, and a single set of pumps, passed the seam to the workings below. The first observation was made with an instrument placed 4 feet from the pit, when the cage in descending on approaching the seam repelled the needle 10°, and when ascending from the bottom, and on approaching the position of the instrument, the needle was attracted 20°; at 8 feet from the shaft, and under the same relative circumstances respecting the cage as before, there was a repulsion of 5°, and an attraction of about double this amount. At 15 feet from the shaft the repulsion was 1°, and the attraction somewhat in excess; and at the distance of 27 ft. there was a repulsion of ½°, but at 34 feet distance there was no sensible motion of the needle caused by the magnetic influence of the cage. The three instruments were all different in their amount of variation, arising, of course, from the slight difference which may be expected in the molecular arrangement of metal in the respective needles, as well as in the construction of the instruments and in the artificial magnetism of the needles. At 15 feet from the shaft a bearing was taken by each of the three instruments, the readings of which were—S. 32° E., S. 30½° E., and S. 29½° E. respectively, and as similar differences were observed in the same bearing by the different instruments at the surface, and seeing that the needles of the instruments varied considerably in their magnetic sensitiveness, this proved that at the distance of about 17 ft. from the pumps there was no perceptible effect on the magnetic needle produced by the pumps alone. Many surveyors are, doubtless, aware that when iron-bars, either cast or malleable, have been for a length of time in a vertical position, or, indeed, in any other relative position to the dipping needle than that of at right angles to it, they become polarised, or, in other words, exhibit all the properties of the common magnet; if the surveying needle be held near the bottom of such bars, the south end of the needle will be attracted, and if held at the top, or in a higher part of the bar, the north end will be attracted. The repulsion of the north end of the needle by the descending cage, and its attraction by the ascending one, is accounted for by this fact. An ordinary cast-iron tram-plate, 4 feet long, placed horizontally 2 ft. 9 in. below the needle, and 14 in. from the centre line of the instrument, produced a difference of ½° in the position of the needle. Two plates so placed made a difference of 1°, these standing in an upright position, and at 14 in. from the instrument made a difference of 4° by repelling the north end, and when placed in the same position, but on the opposite ends, similar poles being together in each case, they attracted the needle 15°. These plates, of course, had been for years in a position favourable to the production of polarisation in them; when placed at a distance of 6 feet from the instrument they move the needle 15', but at 9 feet off there was no sensible effect. When placed at the distance of 2 feet from the instrument, and in the plane of the magnetic meridian (this being at right angles to their former position), the needle was moved 1°; at the distance of 4 feet the needle moved 30', and at 10 feet there was no sensible effect. When the instrument was placed on a level with the plates in a horizontal position, and at a distance of 2 feet from them, similar poles of the plates being together, the needle was repelled about 2½° in the one case, and attracted 3° in the other, and when the disimilar poles of the plates were placed together, so as to neutralise each other, there was no apparent movement in the needle. One of the magnetic poles of one of these tram-plates was at about 10 in. from the end of the plate, so that these 10 in. had to be broken off before the disimilar poles could neutralise the influence of each other. In surveying on tramways errors in reading the needle are sure to take place, unless the following conditions are fulfilled:—The instrument must be placed in the *middle* of the way, and *at the joints* of the plates; the plate-joints must be directly opposite to each other, and not with the sleeper askew, as is frequently the case, and the magnetic poles of the plates must be situated at *the end of the plates*, a rather unlikely circumstance in every instance, as appears from the above last-named experiment.

I am not aware that any ironstone of the coal measures has yet been observed to be magnetic; at any rate, not sufficiently so to affect the needle of surveying instruments, but it is well known that when calcined all iron ores are powerfully magnetic. It is also well known that but few coal mines are entirely exempt from "slips" and "troubles," and many, especially in Scotland, are intersected by dykes of trap, which, during the process of upheaval, has run into the openings in the strata, made by the volcanic force tearing asunder the beds of shale and coal in its upward direction, and is now found in thin threads and veins associated with the coal measures strata, as well as interstratified with them. At the time when this giant force of disturbance was in operation there was heat sufficiently intense to char coal and to calcine ironstone; so that wherever such geological disturbances as have dislocated the strata through which the mine is sunk are found to have taken place, there may be expected to exist some degree of magnetic attraction, arising from the calcined ironstone contained in the coal measures rocks, or brought from beneath by the trap. The surveyor may be in the immediate vicinity of interstratified trap, containing portions of calcined iron, without being aware of it. The erroneous indication of the needle would be a trifling matter if there were in all cases a ready indication of error, but a very considerable error may occur in a survey, and no one be able to ascertain by the needle alone when such error took place, or to what extent (if, indeed, it ever transpired) that an error has been made. Mr. Marcus W. T. Scott, Westminster, a mineral surveyor of upwards of 20 years' practice, writes: "I have often observed a circumstance which I have never yet been able to explain to myself—that when the needle has been steady at a point, and the candle has been suddenly brought down towards the needle, the needle has moved, and not returned to its point again; probably removed a degree or two, and there remained without the instrument being touched. I have often wondered whether it was caused by the heat of the candle, or the motion of the hand causing the air to move through some slight opening, that the needle will not always return to the same point, I have often proved with the same instrument."

I have myself observed the same thing as Mr. Scott here refers to, and I have no doubt but that the hand itself becomes magnetic under certain conditions. That there is an animal magnetism susceptible of excitement by the use of some rather peculiar means, as shown in the movement of tables or wooden boards of any description, is, I believe, generally admitted by scientific men who have investigated this subject. And magnetism of this description may possibly be induced, by repeatedly bringing the hand and candle into close proximity with the magnetic needle. During the explorations of mines, minerals of various descriptions are constantly becoming exposed to the influence of the atmosphere, and of moisture and chemical changes in the composition of these minerals thereby induced, by which currents of electricity affecting the uniform direction of the magetic needle are, doubtless, produced. We know not how far the successive alterations in the atmospheric conditions of mines, and in the pressure of the superincumbent strata may affect the electrical condition of the mine, or the stability of the needle caused by a variation in the direction or in the intensity of currents of electricity; in other words, I do not wonder at local variations of the magnetic needle being in some cases inexplicable. Some useful suggestions have been made in recent letters in the *Mining Journal* on the matter of mineral surveying. The use of two tripods in taking back or check sights, by which a local attraction may be detected, and in all cases greater certainty respecting the correctness of a survey attained, is to the practical surveyor a point worth remembering; and the instances of variation in the needle when in the vicinity of trap dykes, given by Mr. Gardner, should not be forgotten. The difference in the amount of attraction and repulsion which will be observed in this account of experiments with the surveying needle is easily accounted for, but I should like to have the opinion of some of my friends on the subject who were so much astonished at the stupidity of your humble correspondent in mentioning such a thing as 2° variation in a magnetic needle, caused by a small iron cage at the distance of 20 feet. MARK FRYAR.

School of Mines, Andersonian University, Glasgow, June 10.

COLLIERY OPERATIONS—SINKING OF SHAFTS.

SIR,—The sinking of shafts is an operation which varies so much in its character that at times it is found to be one of the most difficult in the whole range of mining engineering, and taxes the powers and abilities of the most competent and experienced colliery manager, whilst at others it is so simple and common-place that it requires only ordinary skill and attention. A great improvement has of late years been manifested in the sinking of shafts, partially owing to the great depths at which coal is now wrought, and I think some improvement may be safely attributed to legislative enactments, whereby all pits are required to be lined or cased if the natural strata are not strong enough to be safe. Perhaps the most difficult operations connected with the sinking of shafts are those where a great depth of quicksand has to be sunk through; and as the writer has had considerable experience in conducting operations of this kind, he will endeavour to give hints and suggestions that may be found useful to all having to conduct such works without having had previous experience, as was the case with myself. I enquired in vain for some practical treatise on the subject, and was thus necessitated, to some extent, to rely upon the judgment of others, who professed to know all about the operation or method of sinking through quicksands, but most of them in reality knew as little as myself—which was nothing; I, therefore, shall endeavour, to the best of my ability, to supply the mining world with this desideratum.

The circumstances under which quicksands are found vary considerably; sometimes it is quicksand and bog to the subsoil; at other times it is found at 15 or 20 yards from the surface. A still greater difference exists in the thickness or depth of them, some not being more than a few feet in thickness, and others as much as 20 yards and upwards. For illustration, let us assume that we are sinking a shaft 12 ft. in diameter, and have previously bored the ground and ascertained the fact that we have a quicksand to sink through (say) 18 yards in thickness, and that we reach it at a distance of 15 yards from the surface, and have previously made the necessary arrangements for winding the sand and water out of the shaft by erecting an engine, &c., of sufficient power, and that we have all the necessary materials upon the ground for prosecuting the work with energy. The first step to be taken would be to sink the shaft within 4 or 5 feet of the quicksand; this might be done without the use of the engine. I may here observe that the shaft ought to be walled from this point to the surface, first laying a ring of timber to the circle of the shaft 9 in. broad by 6 in. deep, bolted together at the joints, and that the diameter of the shaft inside the brickwork should not be less than 17 ft. It would then be necessary to place four balks of timber across the shaft, so as to form a square of such width as to be in the most advantageous position for hanging the brickwork to (an operation to be presently spoken of). The balks of timber ought to be at least 2 ft. square, and 40 ft. long, and supported by either firm packings or a wall built for the purpose at the end of each balk; in either case they should be packed high enough at the ends so as not to touch the ground elsewhere. The balks may be much strengthened by placing an upright piece of timber, 12 or 14 in. square, and 10 or 12 feet long, near the centre of each balk, and running two pieces of similar strength from the top of the uprights to within a few feet of the end of each balk, secured by morticing and tenanting, and then bolting all firmly together. From these balks the brickwork should be hung by means of 10 or 12 rods of iron, 1¼ or 1½ in. in diameter, passing through the balks of timber as near equi-distant from each other as convenient, and secured to bearers put crosswise immediately under the ring that the brickwork rests upon. These bearers, from their short bearing, will be of ample strength if 11 or 12 in square; the ends of the iron rods passing through them will answer with cotters and plate-washers; the top ends, or those passing through the balks, will require a screw of moderate length, so as to screw up the hangers from time to time, as it often happens that some subsidence takes place, but that should be guarded against by keeping the hangers perfectly tight. The brickwork being hung, the head stocks erected, and the pit frame put on, we will proceed to put together the curbs or tubbing.

First, making a slight digression for the purpose of explaining the best kind of tubbing or curbing, in the opinion of the writer, also their necessary strength. There are only three kinds of curbs used for sinking through quicksands, so far as I am aware—timber ones, generally made by sawing three or more rings to the required circle of the curb, and of the same form and make as those for laying ordinary brickwork upon, and nailing or bolting lags, or narrow strips of timber, on the outside of the rings, of the strength considered necessary; the lags are first sharpened on the front side, so as to enter the sand easier. The curb when put in its position is walled with brickwork of the same strength as the width of the ring; these are better adapted for sinking pump wells, and would be found wholly inadequate for sinking through a sand such as we have under consideration. The other kind of curbs are cast and wrought iron, and as a difference of opinion exists as to which is the best, I can only say that cast-iron is decidedly preferable, in my opinion. To sink through a quicksand of 18 yards thickness, it would be wise to have two lengths of curbs, the one to fit into the other like unto a telescope. I have succeeded in driving a curb a greater distance than 18 yards in one length, but considering the extra expense incurred in weighting the curb, and the slow and tedious operation of getting it to sink at all for the last two or three yards, owing to the great outward pressure, it was far more expensive than the plan now suggested would have been. The curbs for the first 12 yards should be 15 ft. diameter inside the flanges, and for the remaining distance about 13 feet 10 in. inside—11 segments for the first-named distance, and 10 for the rest, to form the circle, would be the most suitable. Each segment should be 2 feet deep, and have two bolt-holes for each vertical joint, and four for each horizontal joint, excepting the leading or cutting curb, which should be at the least 5 feet deep, and have five bolt-holes in each vertical joint, and two vertical brackets in each segment, of the same width and strength as the flanges at the top, and tapering to nothing 1 foot from the bottom. The cutting part of the curb should not be more than ¼th of an inch in thickness, and the strength or thickness of the castings used at the lower part of the sand should not be less than 1¼ inch, but for the upper part 1 inch would be strong enough, with flanges 4 in. wide, and two brackets, one from each corner running diagonally across each segment, excepting the bottom, or cutting curb. Returning to the subject of putting the curbs together, I may remark that it is essentially necessary the pit bottom be made perfectly level, and a board put under each end of the segments, to prevent them sinking unequally whilst they are being put together. Thin boards, planed and made to fit exactly between both vertical and horizontal joints, should be used, for the purpose of making the joints perfectly tight, and having something to screw upon; the vertical joints should not be parallel, but broken in each circle of castings, the same as in bricksetting. It is better to put together all the castings that are required (if the depth of the pit will permit). It would be necessary to have 14 yards of tubbing for sinking 12 yards, the distance the first curb should be driven, so that the top of the tubbing would be 2 yards above the top of the sand. It may be necessary to carry the tubbing to the top of the shaft if the water does not find its way off naturally, but this is not often the case; in most instances the distance named will be ample to keep back the water. Four strong chains should then be attached to the curb, or tubbing, and the other ends made secure to four screws, such as are used for lowering pumps in a sinking shaft, the screws to be supported by the balks of timber that the brickwork is hung to. Next, take the packings, or boards, from under the curb, and work the clay loam, or whatever it may be, out, until the quicksand is arrived at. The curb will glide gently down as the earth is removed, and the screws slackened; when the sand is reached, it is probable it will rise up 4 or 5 feet in the shaft; then liberate the curb entirely, and allow it to sink as far as it will, lengthening the chains as the curb sinks, so as to be able to check it should it sink more rapidly in one part of the circle than another, as is often the case from coming into contact with stone, clay, or gravel. On one occasion we had a strong marl for about a sixth of the circle of the shaft, and the rest quicksand, that boiled up for 4 or 5 ft. high. I adopted the plan of driving piles, made from 3-in. planks, where the quicksand extended and worked the clay from under the curb. As the clay was worked out and the curb sunk, the piles were driven down. The greatest possible precaution should be exercised to keep the curb straight or perpendicular, as it is both tedious and difficult to get it straight again should it happen to get out of a plumb-line when it has sunk 7 or 8 yards in the sand; it can only be done by carefully weighting the curb, and taking sand from that portion of the circle that the curb is the highest. Another thing to be especially guarded against is that of taking out more sand than is absolutely necessary to keep the curb running. It is a very good plan to have several men, each one constantly striking the curb with a maul; it is astonishing what effect it has in making the curb sink. I have known several pits rendered useless, and many thousands of pounds lost, from sending out too much sand, and neglecting the precautionary measures previously mentioned, in eagerness to get the curb upon *terra firma*. Each superfluous hoppet of sand sent out must have a tendency to cause the brickwork to subside, and the adjoining earth also. The second curb may be put together in the same manner as the first, and the same precautionary measures used to keep it perpendicular. If the curbs do not sink quick enough, it will be necessary to put some brick or stone work inside the curb to weight it; first putting bearers across the curb, resting upon the flanges, and short planks from those to rest upon the flanges of the curb at the other end. The bearers should be placed at such a distance from the bottom of the curb that the men can stand to work under them, and sufficient space left between the bearers for the hoppet or water-barrel to pass through. Any reasonable amount of weight can thus be added. This system of weighting is more applicable when a curb has to be driven 14 or 15 yards and upwards in one length. For driving a curb 10 or 12 yards under ordinary circumstances it would be more economical, and answer quite as well, to have four or five ordinary screw-jacks fixed upon the top flange of the curb, and underbearers put into the sides of the shaft. The bottom curb should go 2 ft. into the solid, even if it be marl; and when at the bottom the bricks or stone, if any have been used for weighting, should be removed; and wherever any water comes through the joints of the curbs very dry pine wedges should be driven into the space, commencing at the bottom, and making the curb as near water-tight as possible all the way up. Then lay a ring of timber to the intended size of the pit at the bottom of the curb, and brick a 9-inch wall, set with mortar made from hydraulic lime, and puddle between the bricks and curb with nicely-tempered clay, being careful in puddling about the ring. This work carefully done will ensure a dry pit through the sand. The clay also answers another very important use, that of preserving the tubbing from the action of the air, &c., few things being better adapted for that purpose. The remaining observation that I shall make upon the subject of quicksand sinking is, that until every possible effort had been made to wind the water, and proved unavailing, could I advise the use of pumps, and were I to attempt to describe the disadvantages of pumping the water whilst sinking through a quicksand, I should fail in adequately doing so, yet there are times when it becomes unavoidable. In another paper I purpose treating of the more general or ordinary cases of sinking shafts. JOS. GOODWIN.

IMPROVED SAFETY-LAMPS.

SIR,—In the Journal of last week I observed a communication, signed "G. R. C.," in reference to which I beg to offer a few observations. As your correspondent appears to be determined, at all hazards, to depreciate the value of Mr. T. Y. Hall's new safety-lamp, and as I happen to think that all inventions ought to be fostered and encouraged, so far as reason and truth will permit, I beg to be allowed to point out the fallacy of some of the objections urged by "G. R. C." against the lamp. In an abstract point of view I do not perceive that any evil necessarily attaches to the adoption of a total alteration of the entire arrangements of safety-lamps, as your correspondent seems to imply, seeing that the new arrangements may possibly be improvements upon the old ones. "G. R. C." states that he believes that paraffine oil could only be used in safety-lamps in very exceptional cases; alleging, as a reason for this, that paraffine oil requires a much larger quantity of oxygen than the oils generally burnt in safety-lamps, in order to prevent the formation of smoke, and that every foot of air saved in a mine is of importance. Now, Sir, it would, I conceive, be, on the contrary, a very exceptional case in a coal mine where the deficiency of oxygen is such as to prevent the proper burning of any lamp that was so arranged as to burn properly in the open atmosphere; and I must learn it from some other authority than that of "G. R. C." before I admit that a greater quantity of oxygen is needed to prevent the formation of smoke in a lamp consuming paraffine oil than is required to produce an *equal amount of light* from the oil generally used in safety-lamps. The fact of paraffine oil requiring the air to be concentrated upon the wick and flame is not a proof of any greater amount of oxygen being required for the production of a given amount of light than when common oils are used, which do not require such conditions in order to be prevented from producing smoke. Indeed, the composition of paraffine C.H. (in some of its multiples) is almost a guarantee of the great amount of light, in proportion to the oxygen consumed, to be expected from its combustion. But really a mine which has its atmosphere sensibly vitiated by the trifling amount of oxygen abstracted by the combustion of the lamps used for light must be very badly ventilated indeed.

Your correspondent observes that Mr. Hall says he obtains a larger amount of illuminating power in his than is obtained in ordinary safety-lamps; and because Mr. Hall appears to consider that his extra light would, if needful or desirable, either in general or in special cases, admit of the employment of a double gauze, or of an extra fine gauze, which are not at all essential parts of Mr. Hall's lamp, "G. R. C.," I think very unfairly, brings them forward as objections, because complications, and additions to the cost of the lamp. The use of a double cap or cover, which is not peculiar to Mr. Hall's lamp, but an original part also of the common Davy, "G. R. C." does not hesitate to class along with the practicability of employing an extra fine, or even, if needed, a double gauze, and the use of two locks in lieu of one, as toy-like niceties. I admit that in these days of lucifer matches a lamp that will give the light of five or six Davy lamps is almost as safe with one good as it is with two locks of different kinds; because where the light is good to work with, the use of a lucifer match to light a pipe will be likely to save a workman the trouble of trying to open even one lock of his safety-lamp, much more two.

The objection that Mr. Hall's lamp will be more costly than the common Davy is, I think, a trifling one in itself, provided his lamp gives such an extra amount of light as to enable a workman to do his work in a better manner, by enabling him to clean the coals better, while it renders him less liable to personal injury from falls of stone and other casualties, besides removing the inducement held out by a dim lamp, to remove the gauze in an improper part of a mine, as the saving and preservation of life and property likely to result from these sources would fully compensate for any little extra cost entailed by the use of the lamp; and I, therefore, fail to discern anything ludicrous in the idea of such a lamp being used by workmen.

Your correspondent, "G. R. C.," goes on to state that he thinks Mr. Hall's lamp cannot have been tested in a foul atmosphere, because, he says, from the very nature of paraffine and similar oils, any withdrawal of oxygen produces a very material effect upon the amount of light given off, and then he even goes so far as to say that he believes it would be very difficult in a coal mine to supply *sufficient* pure air (I give him credit for meaning *sufficiently* pure air) to make Mr. Hall's lamp burn nicely, without keeping up such a system of ventilation as to warrant the use of naked lights.

Your correspondent is, I believe, quite under a mistake in supposing that the light from paraffine oil is more affected by the absence of a due proportion of oxygen than that from the oil now generally employed in safety-lamps; and I much incline to the opinion that paraffine and similar oils would burn in atmospheres containing less oxygen than the oil commonly used in safety-lamps; provided the lamp was properly constructed for the consumption of such oils, as I believe Mr. Hall's lamp to be.

If the first general rule of the Coal Mines Inspection Act is attended to, it will only be on rare occasions, and under extraordinary circumstances, that a safety-lamp has to burn in an atmosphere where naked lights could not be used with impunity; and the normal use of safety-lamps does not by any means require that they should be capable of burning in vitiated atmospheres, as "G. R. C." appears to imply; they are only intended as

safeguards against the sudden and abnormal fouling of the atmosphere of the place where they are used. A very moderate ventilation will enable either a common oil or a paraffine oil lamp to burn; and beyond this it would, perhaps, be better that they should be self-extinguishing; and this, I believe, is the general feeling on this subject, notwithstanding "G. R. C.'s" fears about the difficulty of getting Mr. Hall's lamp to burn in a vitiated or foul atmosphere.

My purpose will be answered if my remarks prevent "G. R. C.'s" hypothetical objections being prematurely adopted by your readers. Let Mr. Hall's lamp be tested by experience, and not condemned without a trial, upon the *ipse dixit* of "G. R. C.," who appears to hold a few shillings as being ill-spent in a matter involving the better preservation of the lives of our miners, not to mention that of the property of their employers. A.

June 12.

COLLIERY VENTILATION—THE FAN AND FURNACE.

SIR,—In reply to the letter of Mr. Ralph Moore, I certainly do not deny or call in question the good qualities which the Mine Ventilator of Mr. Struvé possesses; but at the same time I showed some grave defects that are connected with its mode of action. It is a necessary result of this that the air it will exhaust is limited to some particular quantity. It does not possess the elasticity of the furnace, or, if the term is admissible, there is not that *sympathy* between its action and the general arrangements of the mine for ventilation which exists between the latter and the furnace.

The extract given from Mr. Taylor's writings certainly presents a rather flattering view of the ventilator of Mr. Struvé. I strongly suspect, however, that though the crust looks so tempting the contents would, when fairly dissected, be disappointing. The Seghill upcast is, no doubt, a favourable specimen, so far as consumption of coal is concerned. But it would not be difficult to produce better examples as to quantity. The best result I have seen is that got by a 9-ft. furnace at Hetton. (See Mr. Wood "On Furnace and Steam Jet," page 48.) This furnace propelled 164,750 cubic feet of air per minute up the shaft, with a consumption of 10·11 lbs. of coal =16·320 cubic feet of air for each pound of coal consumed. This is, perhaps, an exceptional case. But the consumption of fuel by air-furnaces is not a very important matter, as only refuse coals are generally used, of little value; and again we have the cost of the engine, &c., the daily wear and tear, oil, and extra expense for attendance, &c., which will produce a nice little bill at the end of the year, no doubt; and, lastly, we have the liability to derangement, which all machinery is subject to.

Now, the gentleman referred to has made no remarks whatever respecting my objections to this ventilator. He can scarcely, I think, contemplate putting it forward as a substitute for the furnace. With respect to the furnace, no doubt it is most effective in a deep shaft, but I do not admit any force in the objections made to it on account "of the smoky upcast, and the danger of injuring the fittings of the pit, and setting fire to the adjoining strata, notwithstanding *all* precautions."

My idea of an upcast shaft is one which contains no fittings whatever—that is, no brattice, pumps, cage slides, or similar appliances. It is a clear shaft, for the purpose of ventilation alone, and if the strata are not sufficiently strong it is lined with brick, which makes it perfectly safe, no matter what degree of heat may be attained. It is always preferable when practicable to have a shaft of this kind for the purpose of ventilation, as the presence of pumps, cages, &c., in an upcast shaft has a tendency to impede the ventilation more or less, this depending, of course, partly on the area of the shaft. In a small shaft the injury from this cause is sometimes serious.

With respect to the drainage of the Black Vein and the overlying shale by means of air drifts in the Big Vein, and staples sunk between the two seams, I really cannot perceive how it is to be accomplished by the means indicated. The air drifts in the Big Vein would only form air roads on an ascensional principle, certainly perfectly unobjectionable, but *they* will have no tendency to drain the strata or the Black Vein of gas. And as to the staples, what number of them will be required, or how can they be placed so as to effect this drainage? If we suppose a goaf is formed, or in course of formation—say, from the rise to the dip—in any particular district of the mine, the form or extent of this goaf may be taken at pleasure; but if we presume it to be in the form of a square of 8 or 10 acres in extent, now, to put a staple from the Big Vein to the Black Vein (the distance is 60 feet) for the purpose of draining that goaf or pillar working of gas, it would be necessary to place this staple on the *extreme rise side*, and exactly in the *centre* of the panel. This would, no doubt, effect the purpose intended. But a drift or opening made to the rise in the seam into the panel or working above would answer exactly the same purpose, and at a much less cost, if, indeed, at any extra cost at all.

But the more important question remains—How are the whole workings and faces to be drained? Does Mr. Moore really contemplate doing this by means of staples? The only mode of doing this appears to me to be to work thoroughly the seam above. The whole coal and overlying shale are saturated with gas, which escapes in considerable quantities as the workings advance, whether leading main drifts, level headings, cross headings, or stalls. Is it possible so to intersect those workings by staples as to drain them? It is evident that placing staples *behind* those working faces would not effect this, and I cannot conceive that a sufficient number of them can be sunk in *advance* of the workings to effect it; that is, at any conceivable moderate expenditure within the bounds of profitable working. The expenditure of ¼d. per ton would, according to my calculation, give about one staple to three square acres in extent. This would not effect much, and then the cost of making and maintaining the air ways in the upper seam is to be taken into account. ALEX. ROSS.

Gateshead.

GEOLOGICAL COLOURING AND SECTIONS.

SIR,—Some of your correspondents have referred to the apparent "erroneous colouring of the Government Geological Maps of the county of Cork," and state that such discrepancies have proved detrimental to the mining interests of the country. It does certainly appear strange to see slaty rocks coloured as sandstone, and primary schists as sedimentary shale, yet I know of no instance where mining enterprise has been checked, guided, or misled by geological colouring, unless it be for coal. Practical miners seldom or ever refer to geological maps when they examine a district. When we see a good metalliferous rock with strong veins, presenting favourable indications for minerals, no geological colouring will prevent the ground being explored. Indeed, geologists in general confess that they know but little about metalliferous deposits or the primary series, and that their studies and colouring are necessarily more or less confined to fossiliferous rocks and superficial deposits.

It is, however, much to be regretted that the labours of the geological surveyors in the United Kingdom and in the colonies are not more in harmony with the daily observations of practical men, and more in accordance with the structure and internal conditions of the primary series of rocks than their ordinary sections indicate. When we read their description of the structure of ordinary gneiss and slate they are always represented as *stratified* beds, as if it were not possible that any series of rocks could be divided into bands, or slaty structure, excepting through the medium of planes of deposition.

The semi-crystalline process, the concretionary foliation, and planes of cleavage, which are produced by internal molecular action, appear to be ignored altogether by geologists and their students when they look at the vertical bands of crystalline rocks. Hence the cause of the different views entertained by geologists themselves, and the reason why their labours in primary geology is of no service whatever to miners. The vertical and meridional bands of granites, gneiss, schists, &c., seen in South America, California, Australia, Portugal, Norway, and on the north-west coast of Ireland and Scotland, are not understood by geologists, and are supposed to be tilted sedimentary beds. Indeed, when these semi-crystalline bands happen (as they often do) to lean from the perpedicular to the east or to the west many degrees, or change their bearing from the north-west to the north-east, they are laid down as different beds in the sedimentary formation.

Two able geologists are now disputing on the character of some of the rocks in Scotland, one maintaining that there are upper beds of gneiss and mica schist interstatified in the sedimentary formation, and the other says no, that they are intrusive rocks, and not interstratified beds; yet both geologists describe the gneiss and schistose rocks as stratified beds—hence the cause of the confusion. If the so-called upper gneiss and mica-slate are interstratified beds, they must be micaceous flagstones and shale, as real gneiss and schistose bands cannot occupy such a position, since they belong essentially to and must be in contact with their parent primary base—*i.e.*, the laminated and foliated portion of the granitic base below.

I am happy to observe a very favourable change on the Continent regarding the science of geology. The igneous theory of the primary series is all but ignored as incompatible with the conditions within, and chemistry in connection with the science of mineralogy, and crystallography with constant molecular action in a semi-moist base is now satisfactorily and most usefully applied to geology. Professors of geology in Bonn and Berlin will shortly teach English geologists the true character of gneiss, glimmer-schiefer, and thun-schiefer, and it is to be hoped prevent them confounding them with micaceous flagstones and shale of the sedimentary rocks; and that the natural position of the former is vertical, whilst the latter are deposited mechanically in beds more or less horizontally. I hope my friends who are now engaged in mining pursuits on the north-west coast of Ireland will shortly show the Irish geologists the difference between vertical bands of primary rocks and tilted sedimentary bands. EVAN HOPKINS.

15, *Clarendon Gardens, London, W., June* 12.

THE COPPER TRADE.

SIR,—I was highly gratified to read the very sensible letter of your correspondent, "An Observer of Joint-stock Companies," with reference to the so-called "independent" smelting companies, because I am convinced that not one of his queries would be answered unfavourably to the smelters—the existing smelters and large purchasers of copper ores I mean, of course, as they are the only ones who are complained of as monopolists. Leaving the promoters of "independent" companies to answer these awkward queries, I will ask you, in confirmation of your correspondent's view, and to show that your readers are not left without data to guide them in the protection of their interests, to reprint the following paragraph, which appeared in the Journal of Aug. 6, 1859, and formed part of a very able review of Mr. Robert Hunt's Mineral Statistics for the preceding year:—

"From the fact of a large quantity of copper ore being sold by private contract, much labour was necessary to arrive at correctness. The yield of copper ore in the United Kingdom in 1858 was 226,852 tons, for which the smelters paid 1,336,536*l*. From this 14,456 tons of fine copper were obtained, and sold for 1,562,693*l*.; consequently, it is shown that (not taking into consideration interest on capital, or any expenses incurred by the smelter) he charges the miner less than 1*l*. per ton for smelting the ore purchased—a fair proof that the so-called monopoly is not of the alarming nature which some have supposed. In the Cornish ticketings there was a decrease of 9407 tons of ore; and at Swansea a decrease of 459 tons of ore, as compared with the preceding year. The total quantity of ore sold in Cornwall was 182,391 tons, the average percentage of which was 6½; the mean average standard of the year being about 13*l*. 2*s*. 6*d*.=5*l*. 16*s*. per ton of ore. The quantity of metallic copper contained in this ore was 11,831 tons 16 cwts. 1 qr. 12 lbs., the money value being 1,057,534*l*. 16*s*. 6*d*. The total quantity of copper produced from British, foreign, and colonial ores in 1858 was 31,610 tons 17 cwts. 1 qr. 18 lbs., the value of which was 3,417,149*l*. Our importations of copper ore were 78,641 tons in 1858, against 75,832 tons in 1857, showing an increase of 2809 tons; while there was a diminution in the quantity of regulus imported to the extent of 804 tons."

Now, perhaps some of your anti-monopolist correspondents will attempt to disprove the assertions there made, or, if not, to find a plausible pretext for concluding that this is an exceptional state of things. But I would remind such individuals that the deductions you have drawn are upon an entire year's dealings, and the result I affirm is as unsatisfactory, so far as the smelter is concerned, as could be shown upon any similar period. Again, we read of and smile at the outcry about surplus copper, and our frauds upon the miners—the one of which the smelter seldom obtains, and the other he never practices. Of the latter I shall say nothing, regarding such unfounded assertions as unworthy of notice. As to the surplus copper, even assuming that the smelter invariably gets out more produce than he pays for (which is not the case), the difference would certainly not amount to anything like the interest at 3 per cent. upon the capital at stake. The large smelters have between them a capital of 20,000,000*l*. continually floating, and surely they are entitled to some profit upon such an investment. At 3 per cent. 20,000,000*l*. would give 600,000*l*. interest, and considering that the total quantity of ore purchased in a year is only about 300,000 tons, the smelter ought to get about 2½ extra produce out of each ton of ore purchased to compensate for the interest upon capital. Such being the fact, I think your readers will admit that—1. The smelter charges the miner less than 1*l*. per ton for smelting his ore.—2. That the smelter does no injustice to the miner.—And 3. That it is almost impossible (from the large capital, individual care, and economy required) for "independent" companies to carry on smelting operations with profit to themselves or with credit to the commercial world. CUPRUM.

IRON SMELTING—MESSRS. BROAD AND ONIONS.

SIR,—As a furnace manager, I take a deep interest in the smelting of iron, and have perused of late the specification of Mr. John Broad, who has patented an apparatus for introducing fuel into the hearths of blast-furnaces through the blast-pipes and tuyeres, and to my mind I think his apparatus simple and efficient, and a boon to the iron trade; but, like all other useful and practical inventions, it appears to have a prior claimant—I allude to the correspondence in your valuable Journal of Mr. Onions, who, I find from his specification, obtained a patent in 1856, entitled "Improvements in the Manufacture of Iron," wherein he states, as a primary feature of novelty and importance, that his invention consists in the injecting or supplying fuel, *smoke*, gas, and other carbonaceous matters, into blast-furnaces through the tuyeres, or boshes, and sets up a positive and definite claim for so doing, without describing from drawings or otherwise any practical or reliable mode of effecting this object, which, if he had done, would have palliated the want of novelty in his theory.

I do not profess to understand the law of patent monopolies, but I have always understood that *novelty* forms the true basis on which the value of a patent grant can be held or sustained, and with that view I beg, through the medium of your useful Journal, to state that, twenty-eight years ago, I witnessed at Messrs. Banks's Works, at Barber's Field, near Bilston, Staffordshire, an experiment for applying small coal, or other fuel, through the tuyeres of their blast-furnaces. The attempt with the means used failed through the pressure of the blast preventing the fuel so intended to be applied descending in sufficient quantities to be carried forward through the tuyeres into the furnace: and, in addition to this, of my own knowledge I am enabled to state that the late Mr. James Broad, during his superintendence at Cinderford (as reported in your Journal some time since, in this controversy), used a large quantity of charcoal dust in the smelting of iron, by filling the blast-bags during the time of casting, the blast driving it into the furnace through the tuyeres. This practice was continued for some time, and well known to all that were at the time connected with the working of these furnaces. This fact I submit, Mr. Editor, should settle the point as to priority of invention, and satisfy Mr. Onions, who must have had no practical experience in the manufacture of iron, or he would not have ventured to have come before the public with a supposed new invention, when the theory of his so-called novelty had been so extensively known and repeatedly tried, for a period (to my knowledge) of twenty years prior to the date of his patent. W. SARGEANT.

Cinderford Iron-works, Gloucestershire, June 10.

M. FREMY'S CHEMISTRY OF STEEL—No. II.

SIR,—In continuation of my remarks on this subject, I am far from denying that nitrogen may be found in steel, for I believe that steel may be contaminated with a portion of almost all the simple undecompounded substances or gases; but what I deny is that the nitrogen exercises any beneficial effect upon the quality of the steel with which it may be combined, and all practical evidence goes to prove that the effect of exposing steel to the action of nitrogen is to debase the quality of the steel. There are three prominent cases in which this deterioration of quality in the steel is especially observable.

1. *In the Pneumatic Process.*—In this process the cast-iron which is intended to be decarbonised sufficiently in order to convert it into cast-steel is exposed in every particle to the action of nitrogen gas, and it is likewise by the oxygen purified from those substances which are considered inimical to the production of a good quality of steel,—excess of carbon, silicon, &c. And though sulphur and phosphorus are only partially removed by the pneumatic process, still there are pig-irons so nearly free from these impurities that practically they may be considered as perfectly pure. The steely product obtained under these conditions ought to be steel of the finest description, if the nitrogen theory be true. But the results obtained are quite at variance with the theoretical conclusions. The best results from the pneumatic treatment of the purest pig-irons afford a steely product which is ductile when heated, and strong and tough in the cold state, and which hardens like steel, but with this difference,—the hardening is merely superficial, so that when the hardened surface is subjected to impact it gives way, in consequence of the soft metal underneath yielding to the blow. The edge also of a chisel made from this steel gives back, for the soft metal behind the hardened edge cannot sustain the shock of impact. Thus, this highly nitrogenised product is destitute of that most valuable property of true steel,—its capability of hardening, not merely superficially but throughout the mass, when heated and quenched in water. Neither does the fracture of a hardened edge of pneumatic steel exhibit the fine close pearly texture of true steel when hardened, but, on the contrary, the grain is open and granular.

2. *In the Manufacture of Puddled Steel.*—The success of this operation, by which pig-iron is decarbonised so as to be converted into bar-steel, depends wholly upon keeping the cast-iron during the puddling operation immersed in a bath of liquid oxide of iron, to the entire exclusion of nitrogen either from the fire-place of the furnace or from atmospheric air which may pass into the furnace through the door. And without this bath of protective slag steel cannot be obtained in the puddling-furnace from cast-iron; and if the bath of iron oxide be insufficient the result is imperfect, and soft defective steel only is obtained, of irregular quality. Thus, with access of nitrogen puddled steel of good quality cannot be produced.

3. *In the Manufacture of Cast-Steel.*—If the lids of the melting-pots are imperfect, or if there are cracks or openings in the sides of the melting-pots, so that the free nitrogen from the fire can pass into the melting-pot during the operation of melting the steel, then it is found that the steel is deteriorated in quality, and does not possess that amount of "body" which it is found to possess when melted under conditions which ensure the exclusion of nitrogen during the melting operation. Thus, practically there is no result which favours the supposition that nitrogen either improves the quality or is essential in the composition of steel.

When saw-file steel, which when hardened will scratch rock crystal, is melted with sal-ammoniac or nitrate of soda, or ammonia, it will no longer harden so as to scratch rock crystal; and if a large proportion of the nitrogen compound is added during the melting operation, the steel will not harden so as even to scratch glass. Now, as neither chlorine nor soda have any softening effect when employed, except in combination with nitrogen, I infer that nitrogen actually softens steel, and deprives it of much of its most valuable property.

M. Frémy's experiment, upon which he so much relies, shows clearly to a practical man that the exposure of a piece of malleable iron (pure iron is unknown) to the action of ammoniacal gas renders it less apt to absorb subsequently the dose of carbon requisite for its conversion into steel than another piece of the same bar which has not been previously subjected to the action of ammoniacal gas; for when both pieces of iron had been exposed for three hours in a heated porcelain tube to the action of purified coal gas, the piece which had been previously subjected to the action of ammoniacal gas was found only so far carbonised as to have passed into the state of steel, whereas the other piece of iron, which had not been previously treated with ammoniacal gas, had absorbed so much carbon as to have passed into the state of cast-iron. So, in point of fact, the true deduction from the details of this experiment is the very reverse of the conclusion at which M. Frémy has arrived. Nitrogen has had an influence possibly; but, if so, it has been an influence by which the conversion of bar-iron into steel has been retarded, not accelerated. In the converting furnace, when either bar-iron or iron ore is converted into steel, if the cementation be prolonged beyond that period which experience has taught the steel converter to be sufficient to effect the object he has in view, the steel will pass successively into the state first of white cast-iron, and then of grey cast-iron; and from the same converting-furnace, and at the same operation, I have repeatedly obtained the softest steel, steel of medium temper, highly converted steel, white cast-iron, and grey cast-iron. Are we to conclude that the steely products had been nitrogenised, and the cast-iron had escaped? Such an assumption could be only a gratuitous one, and not susceptible of any proof; whilst, on the other hand, the whole charge of the converting-furnace can by prolonged cementation be reduced to the state of cast-iron, possessing all the characteristics of the grey and white cast-irons of commerce.

Had M. Frémy arrested the conversion of his bars at an earlier stage of the experiment, he would have found that the bar which after three hours conversion had passed into the state of cast-iron would have been in the condition of steel. With reference to the knife-blade experiment, the mere exposure of a thin blade of steel to a considerable degree of heat for two hours is quite sufficient to de-steel it, without the aid of any amount of hydrogen gas. M. Frémy appears to be under the impression that he has divulged something which it was the interest of steel makers to keep secret. I cannot myself see that he has done more than attempt to resuscitate a very old and quite used-up theory respecting the constitution of steel, nor can his labours prove of the slightest commercial value in the present or future of the steel trade.

In 1793, Mr. David Mushet, my late father, abandoned the use of animal carbon (bi-carburet of nitrogen) in favour of well-dried oak charcoal (*vide* his papers on Iron and Steel, page 726), because the affinity between well dried oak charcoal and bar-iron was more powerful than between animal carbon and bar-iron, and the steel was of better quality. Now, I grant that oak charcoal fresh from the retort may contain nitrogen in homœopathic doses, but animal carbon contains a large proportion of this gas, therefore, under similar circumstances, bar-iron when carbonised by animal charcoal ought to be converted into better steel than when carbonised with oak charcoal; but such was not the case, and such is not the case to this day. It is known that certain Swedish irons have for centuries produced steel of a superior quality to any steel manufactured in other localities. Even M. Frémy must admit this fact. Yet the iron ores smelted in Sweden are not in the least remarkable for their purity, or even for their richness in metallic produce. In many parts of the world iron ores of greater purity and richer in iron are smelted or converted by the Catalan or other processes into cast-iron, bar-iron, and steel; but the steel does not possess the excellency of Swedish steel. Is it only in the Swedish blast-furnaces and forges that the proper quantity of cyanogen compounds can be generated, so as to impart to the Swedish steel products the requisite proportion of carbide of nitrogen? Such a conclusion would be contrary to all precedents in metallurgy; therefore the cause of the superiority of Swedish steel must be due to some other cause than that of its containing carbide of nitrogen.

There is no doubt, I think, that the presence of cyanides in the furnace of cementation in some way hastens the combination of carbon and bar-iron; but it is quite certain that unless the bar-iron is in itself that peculiar alloy which constitutes good steel when mixed with carbon, no application of cyanogen can elevate its character as a steel-iron. We might as well expect that the exposure of copper to chemical agencies would convert it into brass. Iron and carbon without steelifying alloys can no more constitute steel than copper can become brass when unalloyed with zinc.

There is one most singular observation made by M. Frémy. He says,—"Carbon itself, which combines so easily with iron for the production of pig-iron, should when employed in a convenient proportion, by reason of its finity, form steel. Every one knows, however, that cast-steel is not produced under these circumstances." This observation shows most clearly the extraordinary lack of practical knowledge which prevails among scientific men. Mr. David Mushet obtained in the year 1800 a patent for the manufacture of cast-steel by melting bar-iron and charcoal together in melting-pots or crucibles. This process he himself fully carried into practice, and with complete success. Many tons of the steel thus produced by the union and fusion of well-dried oak charcoal and bar-iron in the melting-pot were purchased by Mr. P. Stubs, of Warrington, the celebrated saw-file manufacturer, and the steel was by him preferred to other steel,—that is, to the steel of cementation melted into cast-steel. Subsequently Mr. Mushet sold his patent for 5000*l*., a large sum when the insignificant scale of the cast-steel manufacture at that date is taken into consideration. Many years after the expiration of the patent, Mr. Ebenezer Elliott, better known as the "Corn Law Rhymer," wrote that the wealth and prosperity of his native town, Sheffield, were mainly due to Mr. Mushet's discoveries, and to his processes for the manufacture of cast-steel. And yet sixty-one years after the date of Mr. Mushet's patent we find our eminent French philosopher remarking that "every one knows cast-steel is not made by melting bar-iron with charcoal;" whilst at the present moment Messrs. James Jackson and Son, of St. Seurin, one of the most eminent steel-making firms in France, manufacture the whole of their cast-steel by my late father's process,—*i. e.*, by melting bar-iron with charcoal; neither nitrogen nor any nitrogenised substance being employed in the manufacture of cast-steel as carried on at St. Seurin; and in Sheffield thousands of tons are thus manufactured annually.—*Coleford, June* 12. ROBERT MUSHET.

Errata last week.—In my reply to "Chymicus," for "oxide of iron," read "oxide of manganese." In my letter on the New Theory of Steel, for "present pig-irons," read "purest pig-iron."

NORTH WALES SLATE QUARRIES—No. III.

SIR,—Prominent amid the wild rocks of Arfon is Carnedd Llewellyn, piercing its bold head to the deep azure of heaven. From Daulyn Quarry I had the curiosity to ascend the Carnedd. The scenery here is wild and extremely imposing, stretching itself over vast plains and dells. The island of Anglesey crouches by its feet; and its brother mountains, even gigantic as they are, seem from its top like mere dwarfs,—pigmies of a coward race,—compared to this monster Atlas. The irregularity of the scenery cannot be surpassed; the perpendicular rocks of Ffynon-y-Gareg wear a terrific aspect, and magnificently grand are the Tryfans.

A few years ago I visited Cwm Elgin Quarry, which is situate on the shoulders of the great Carnedd. A few days previously a storm had emptied its rage on these mountains, and the water was still rioting down the ravines, raging, foaming, and rushing over formidable rocks with tremendous noise, awakening the mountain echoes with its shouts sublime. The slate vein is in a good position, commanding an excellent throw for refuse, with a front elevation, offering an extraordinary facility for forming galleries and quarrying it out. The blocks are of good sizes, averaging rather larger than slate quarries generally. The colour is marketable, and the quality durable; but, strange to say, this stone is most difficult to work; and after the thousands of outlay in working here before and after my visit, I do not think it has paid any profit. An eminent judge of slate quarries was with me on the spot. We carefully examined the vein, which is everything that can be desired with regard to position and size. The slates split well, but we found one very great drawback,—that is, the great difficulty of cutting the blocks across, in order to obtain sizes and finished splittings, and that without wasting the blocks, which is indispensable in remunerative quarries. This is partly due to the cohesive particles of the stone, and the sulphur interspersed throughout its texture. I believe, by adopting one simple tool, this quarry might be worked to profit; but I question the possibility of its ever doing so with machinery, as now used there.

Cedryn is another slate quarry, somewhat already extensively worked. The slate vein is tolerably large, but contains a deal of unprofitable mixture, and in several instances detrimental to the cleavage. The splitting is easy, but there is a tendency in the slate blocks to split round. The slate is obviously softer than those of Cwm Elgin, and likewise of a more supporting texture; the colour is greyish-blue. Some years ago I was sent by a gentleman to examine the rock, and I then advised him to be careful in not expending money upon it. Shortly after this occurrence it was deemed a promising undertaking by two agents of quarries,—good judges, too,—and, consequently, the work was undertaken, but, I regret to say, with profitless results. Other agents again attempted the work, but with equal bad success. Looking over the ground from whence I started, I only know one place that will, in my opinion, in future years (if discovered by some adventurer) turn out a real good slate quarry. There are many slate veins which I have deemed unworthy of notice, although some of them have been highly spoken of by others, as having qualities unknown and unheeded in good slate.

Clogwyn-y-Fuwch is another slate quarry, close to the celebrated Lake of Geirionydd, and not far distant from the navigable port of Trefriw. The slates are black, but are well known to be as durable as any in North Wales. The trap rocks above it have pressed upon the slate vein, and it has, therefore, but a few yards of thickness; nevertheless it was worked to profit for many years. Some wealthy slate quarry proprietors now-a-days owe their start in the world to this old quarry. It is scarcely to be thought that this rock could prove remunerative just now. The scenery surrounding this quarry is chequered with many sublimities in rugged and lofty rocks. There are also contiguous to it some lead mines, containing a limited admixture of silver. To the antiquary this spot will prove interesting, in consequence of several legends connected with the national bards and poets, so well-known in British history by the names of "Taliesin" and "Merddin."

Llanrochwyn is another black slate quarry, about 1½ mile from the foregoing one. This quarry was worked underground, and possibly the first that was done so in Wales. The vein is now so circumscribed and narrow that the work has been altogether abandoned, though for some years past it has paid extensive profits, and that at a time when slates that are now selling for 8*l*. 15*s*. per thousand were then sold for 4*l*. 10*s*. To every appearance the surrounding and overhanging rocks have compressed the slate vein to, at least, one-fifth of its original dimensions. An equal bulk of slate-block from this will yield a larger proportion of slates than any other quarry known to me; and this is the best splitting stone I ever saw in my life. Unfortunately, the black sulphur entering so largely into the composition of this slate is an element working its destruction, in consequence of its rapid decomposition and crumbling off under atmospheric influences. The non-endurance of this slate has caused a prejudice in some parts of England against black slates, that are as durable and of as good quality in every respect as any in Wales. A year or two ago one of the pillars supporting the overhanging rock gave way, and a great fall ensued, which I calculate to be some millions of tons. The trees are still growing on the top of the fall, with one fine oak with its luxuriant foliage branching handsomely over the ruins and deep solemn stillness of the abandoned old quarry.

June 11. CYMRO.

NORTH WALES SLATE QUARRIES.

SIR,—I have read with much pleasure the letters of your correspondent "Cymro." His theory as to the vast importance of ribs, or posts of hard rock, in a slate quarry, is consistent with my own practical experience of many years past, and their existence in the best quarries at present known can be easily established; whilst to their absence in a quarry recently abandoned, after an outlay of 200,000*l*., may be fairly attributed that vast sacrifice of money, and, to a considerable extent, the consequent distrust of slate

quarries which now, unfortunately, so much prevails. Had the advice of an operative quarryman been taken these sad consequences might have been avoided.

Bangor, June 10. SCHETUS.

MINING IN WALES—THE LOWER SYCHNANT MINE.

SIR,—Several letters and articles having appeared in the Journal recently respecting Sychnant (or Pool Park) Mine, containing very incorrect and exaggerated statements, which, if uncontradicted, may produce very erroneous impressions, you will, perhaps, allow me to give some authentic information about it.

This mine was commenced about fifty years ago, but did not prove profitable until about 1821, when a large quantity of ore was found, and a good profit made. As a specimen of the exaggerations which have appeared in the Journal, it was asserted that Mr. Phillips had received 50,000*l.* in one year from Lower Sychnant; whereas the entire profit upon his share (11-32ds) during ten years, from 1820 to 1830, amounted to 19,000*l.* only. "Old Miner" says that the returns were from 3000 to 4000 tons per annum. I find that in the three best years (1822-3-4) the average was 1880 tons, and up to the present time not more than 9000 tons have been raised in the whole—a large quantity certainly, but nothing like the quantities mentioned in the Journal. The price of ore at that period was from 13*l.* to 14*l.* per ton only, not 18*l.* to 20*l.* As to the small price given for raising being the cause of much ore being left behind, I believe some ore is now being got at the Minera Mines at 1*l.* per ton, and yet I will venture to say that nothing of value is left behind; and it is very unlikely that Mr. Phillips, a practical miner, holding one-third of the mine, and extremely assiduous in his duties as manager, would allow ore to be left, while he was paying as much as 7*l.* per ton for getting ore in other bargains. Moreover, I have always heard that Mr. Phillips was very liberal in his prices for raising ore, so that there would be the less inducement to the men to leave it.

The Upper Sychnant Mine was amalgamated with Lower Sychnant in order to drain the former; the latter was (and is still) considered to be exhausted, but it was necessary to have it in order to obtain access to a swallow there. So far from the present company having done nothing in it, they have driven a deep level, at a large cost, under all the old workings, but without seeing anything of those rich courses of ore which await the lucky future proprietors of Lower Sychnant, or, indeed, any one at all; and the objection on the part of our company to parting with this part of the ground is because this level (our water-engine) goes through it, and not on account of any value we place upon it for ore. As to its being one of Mr. Burton's old mines, he never had a share in it during the former working; and with regard to the Park Mine, I have never heard that his successors there have greatly enriched themselves, in spite of his kindness in leaving the treasures your correspondent so vividly describes.

"Old Miner" informs us that our landlord is dissatisfied with us; this is what we have not yet heard from himself or his agent; but if he is, "Old Miner" has probably caused it by his misrepresentations. I do not say they are wilful ones; for as he has never been underground at Sychnant, he may have been deceived. Having only recently been connected with the management of the Sychnant Mine, I do not feel responsible for the shortcomings, if any, of my predecessors; but in justice to them I may say that I have recently had the mine inspected by a person whose ability, honesty, and knowledge of his profession even "Old Miner" will not dispute, and he says:—"I was agreeably disappointed to find the evil reports which have been circulated respecting the manner in which this mine has been worked in a great measure untrue. I have no hesitation in saying that in most cases the mine has been systematically opened, and under all circumstance the operations have been carried out and conducted in a satisfactory manner. It is true that large and rich deposits of lead have been found, but it also true that thousands of fathoms of barren ground have been cut and removed in search of those deposits of lead; and to overcome the difficulties of long distances between the shafts, a series of good levels have been constructed at various depths, and sumps opened through from one level to the other; by this mode of communication a good ventilation is effected, and the necessary operations carried on without much difficulty."

"Old Miner" appears to think that I wrote the letter signed "Young Miner:" I know nothing of it, nor of the writer, but the statements in it were generally correct; and the question as to why the rich deposits of ore in Lower Sychnant were left still remains unanswered.—*Stansty Lodge, Wrexham, June* 10. R. V. KYRKE, Jun.

WHAT CONSTITUTES AN ACCEPTANCE OF SHARES?

THE BOG LEAD MINING COMPANY (LIMITED) *v.* MONTAGUE.

LORD CHIEF-JUSTICE ERLE: This was an action for calls, and the question was whether the defendant had accepted the shares allotted to him by the plaintiffs, and in respect of which the calls were made, in such manner as is required by the 19th and 20th of the Queen, c. 47, to make him a shareholder? The defendant paid the deposit upon the shares in advance to the bankers of the company, and applied for the shares by a letter, which was in a printed form provided by the company, and which, so far as could be done before allotment, did testify the defendant's acceptance of the number of shares mentioned therein in the event of their being allotted to him by the company. The letter of application was as follows:—"To the directors of the Bog Lead Mining Company (limited), shares 5*l.* each. Gentlemen: Having paid to the Bank of London to your credit 5*l.*, being a deposit of 5*s.* per share on 20 shares in the above company, I request you to allot me that number of shares, and I hereby agree to accept the same, and undertake to pay the amount of calls that may be made thereon, in accordance with the company's Act of Incorporation."

In compliance with this letter, the company allotted to the defendant the number of shares applied for, and he, in fact, assented to such allotment, and paid two calls prior to that now in question. The defendant never testified his acceptance of the shares in writing under his hand otherwise that by signing the letter of application, and the company never "directed" any other form. Upon these facts appearing at the trial before Justice Wightman, at the last Kingston Assizes, the learned judge, upon the authority of the case of the New Brunswick Railway Company *v.* Muggeridge, 4 Hurlstone and Norman, 160 and 580, which was relied upon by the defendants as in point, directed a nonsuit. A rule was granted in last term to show cause why the nonsuit should not be set aside, and a new trial had, upon the ground that the ruling of the learned judge was erroneous. Upon the argument, the defendant insisted that he had never become a shareholder, for that, by the schedule to the Act, table (B.) 1, "no person shall be deemed to have accepted any shares in the company unless he has testified his acceptance thereof by writing under his hand in such form as the company from time to time directs;" and that in this case no form of acceptance had been directed or subscribed, except the letter of application, which could not be construed as an acceptance of the shares, because it preceded the allotment. And he insisted that nothing short of a formal acceptance of the shares after they were allotted could satisfy the statute.

The plaintiffs, on the other hand, argued that, if this letter of application did not contain a sufficient acceptance, then there was no form of acceptance directed by the company, in which case, by virtue of sect. 9 of the Act, the schedule must be considered as disclaimed by, and so inapplicable to, this particular company; and that, if the letter of application agreeing to take and accept a specific number of shares afterwards allotted could operate to testify an acceptance of the shares, as they contended it could and did, the statute was complied with. We are of opinion that this latter argument ought to prevail, and we need express no opinion upon the former.

It may be that, in the case of a contract for the purchase of unascertained property to answer a particular description, no acceptance can be properly said to take place before the purchaser has had an opportunity of rejection. In such a case, the offer to purchase is subject not only to the assent or dissent of the seller, but also to the condition that the property to be delivered by him shall answer the stipulated description. A right of inspection to ascertain whether such condition has been complied with is in the contemplation of both parties to such a contract, and no complete and final acceptance so as irrevocably to vest the property in the buyer can take place before he has exercised or waived the right. In order to constitute such a final and complete acceptance, the assent of the buyer should follow, not precede, that of the seller. But where the contract is for a specific ascertained chattel the reasoning is altogether different. Equally where the offer to sell and deliver has been first made by the seller, and afterwards assented to by the buyer, and where the offer to buy and accept has been first made by the buyer and afterwards assented to by the seller, the contract is complete by the consent of both parties, and it is a contract, the expression of which testifies that the seller has agreed to sell and deliver, and the buyer to buy and accept, the chattel; and, indeed, it has been expressly decided that in this latter case the Statute of Frauds may be satisfied by an acceptance preceding the delivery: Cusack *v.* Robinson, Queen's Bench, May 25, 1861, 7th *Jurist*, N. S., 542.

Now, it appears to us very clearly that a purchase of shares is analogous to that of a specific chattel, because the very thing to be purchased is ascertained by the offer contained in the letter of application, and the offer is subject to no other condition than the assent of the person to whom it is made. Each share is a right to a fixed proportion of the profits of an existing undertaking, subject to the payment of an ascertained amount of money when called for. Each share gives the same right as every other, and there is not necessarily even the distinction of separate numbers until the register is made up, if then. The directors, therefore, by assenting to the letter of application in its terms, and allotting to the applicant as many shares as he has applied for, do give him the very thing for which he has asked, and of which he has, by anticipation, testified his acceptance. To hold this not to be sufficient would be unnecessarily to introduce into the law an anomaly of a startling character—that a contract in writing for the purchase of goods may be valid or invalid, according as the offer has originated from the buyer or the seller. If a deed were drawn up for the sale and purchase of the shares, incorporating the terms of the letters of application and of allotment, and signed and sealed by the applicant and the company, would it testify the acceptance of the shares or not, according as it was first executed by the applicant or by the company? Everybody would exclaim at the absurdity of the question; and yet it is only absurd because the execution of the deed by both parties would, in either case, obviously be but one transaction. And the letters of a correspondence constituting a bargain are equally one transaction; and, so long as there is a proposal by either party accepted by the other, there is a good contract in writing, because the letters testify the acceptance by each party of the terms agreed upon between them both.

In the cases relied upon by the defendants the statute was not complied with, because the company had directed a form of acceptance other than, and different from, the letter of application, and that form so directed was not signed. The letter of application in that case was not intended to be the acceptance to satisfy the statute. Indeed, it was not even definite as to the number of shares to be taken, for it only fixed the maximum. It is not, however, necessary to found our judgment upon this latter distinction, because, for the first reason stated, the authority relied on by the defendant is inapplicable to the present case. For the reasons already stated we hold that the nonsuit was wrong, and that the rule for a new trial must be absolute.

MINING LAW—RIGHT OF WATER.—The case of "Ennor *v.* Barwell," which some time since was heard before Vice-Chancellor Stuart, has been brought to a conclusion, so far as a Court of Equity is concerned, by the Lords Justices deciding it should be tried at common law at the next Spring Assizes, at Taunton. Lord Justice Knight Bruce, in the course of his judgment, stated that the Court believed a reasonable arrangement of the disputes, without further contest, and without substantial damage to either side, to be practicable, and, with a fair inclination to peace and economy, not difficult. His Lordship strongly recommended the attempt to the made, and the solicitors and counsels to assist in it, for the expenses must have been enormous, and it was with deep regret that they found themselves unable now to terminate the litigation, so far as that Court was concerned. After considerable discussion, it was arranged that the parties should be restrained from going on with the action until March next, at the Taunton Assizes, without the leave of the Court, and that it should be admitted at the trial that all the legal estate that Davies could confer on the plaintiff had been conferred before the filing of the bill, and before the wrong complained of had been done. Mr. Bacon, Q.C., and Mr. Francis Webb appeared for Mr. Barwell, the appellant; Mr. Malins, Q.C., Mr. Wickens, and Mr. Hanson were for Mr. Ennor; and Mr. T. E. Foakes watched the case on behalf of the Ecclesiastical Commissioners.

ONE OF THE OLDEST MINING AGENTS IN CORNWALL.—On Whit Monday Capt. JAMES THOMAS, of Bolenowe, Camborne, who was many years agent in Dolcoath Mine, and who is now in his eighty-fourth year, walked from his residence to Gwennap Pit (the Old Cathedral Mine), a distance there and back of fourteen miles. It is a remarkable fact that, seventy-three years ago, Capt. Thomas heard JOHN WESLEY preach on the same spot.—[Capt. Thomas is the father of Capt. William Thomas, of the Schull Bay Mines, county Cork.]

Meetings of Mining Companies.

NEW TRELEIGH CONSOLIDATED MINING COMPANY.

An ordinary general meeting of shareholders was held at the company's offices, Old Broad-street, on Thursday, Mr. CARR in the chair.

Mr. NICHOLSON (the secretary) read the notice convening the meeting, and the minutes of the last were read and confirmed.

The accounts showed a balance of liabilities over assets of 6*l.* 17*s.* 8*d.*

The following report was then read:—

June 12.—Carr's engine-shaft is down 6 fms. below the 80. The lode in this shaft presents a more promising appearance than for some time past; it is now 2 feet wide, composed of quartz, mundic, and occasionally producing good stones of copper ore. Should the ground continue as at present, we hope to get deep enough for a 90 fathom level in about four months from this time; when this object is accomplished we shall at once commence driving east to get under the ore ground gone down from the 80. The 80 is driven east of the shaft 24 fms., through a lode producing from 3 to 6 tons of copper ore per fm.; the lode in the present end is 3½ feet wide, and will turn out 3 tons of ore per fathom. We are pushing on this end with all possible speed, in order to get under the best course of ore we had in the 70, which we calculate to be about 5 fms. in advance of the present end. The rise in the back of this level is up 10 ft.; the lode is 2 ft. wide, and will produce 2 tons of ore per fm. The stopes in the back of the 70 (two in number) will produce fully 6 tons of ore per fm. The 70 east, on the new or Wheal Maria north lode, will produce 1½ ton per fathom; this is a very kindly lode, and from appearances likely to improve. We are driving two cross-cuts, one at the 70 to intersect the south lodes, and the other at the 80 to intersect Wheal Maria north lode, that we are now opening on in the 70, and from the underlie of which we calculate to have about 17 fms. more to drive to cut it. We shall have at our next sampling, and for the same time as last, about 140 tons of similar quality copper ore. In conclusion, you will observe that, upon the whole, this mine is opening up remarkably well, and when fully developed will confirm my former report.—FRANCIS PRYOR, manager; JOHN PRINCE, Jun.

The CHAIRMAN having moved the adoption of the report and accounts, thought that the shareholders would consider their prospects satisfactory. They had laboured for a long time under a cloud, but he hoped they could with some degree of certainty look forward to a brighter future, and that they would soon be in a much better financial and commercial position.

Mr. W. BURDSEY had carefully perused the report, and he confessed himself much pleased at its contents, for it plainly proved that their mine was in a very much better position than at the last meeting; and he felt assured that it would soon prove itself to be a substantial and remunerative property. He was glad to see that their working costs were increasing, for it proved that the mine was being opened vigorously, and in a miner-like manner. Looking at the different points of operation, that the shaft would be sunk to the 90 in about four months, that in the 70 they had gone over a fine course of ore for 24 fathoms in length, that in the 80 they were just coming under that ore ground, and that the winzes were going down in good ground, he thought their prospects were as encouraging as could be desired.

The SECRETARY, in answer to questions, stated that the cost for May, excluding the merchants' bills, amounted to 334*l.* 12*s.* 9*d.*, but that included an amount for subsist.

Mr. LITTLE did not think that their returns increased in the same ratio as their costs.

The CHAIRMAN believed that, at any rate, their present raisings would cover costs.

The report and accounts were then adopted, and the committee re-elected, when a vote of thanks to the Chairman terminated the proceedings.

LABUAN COAL COMPANY.

The first annual general meeting of proprietors was held at the company's offices, 41, Threadneedle-street, on Wednesday,

Sir JAMES DALRYMPLE ELPHINSTONE in the chair.

Mr. A. WILSON (the secretary *pro tem.*) read the notice convening the meeting.

The balance-sheet, made up to Dec. 25, showed a cash balance at the company's bankers of 2997*l.* 11*s.* 1*d.*; and a statement of receipts and disbursements of cash, from Dec. 25 to May 31, 1861, showed a balance at the bankers of 3779*l.* 7*s.* 4*d.*

The report of the directors stated that by the overland steamer of Aug. 4 the directors dispatched Mr. J. McLaren as general manager, and Mr. J. Hunter as mining superintendent, with a competent European staff of eleven efficient men for supervising the works. Unfortunately, Mr. McLaren died of a sun-stroke in the Red Sea, when Mr. Hunter proceeded in charge of the staff to Singapore. Within seven days of their arrival at that port, by the energy of Messrs. Middleton, Harrison, and Co., the company's agents, a vessel was secured, and the whole party dispatched to Labuan, distant 700 miles, accompanied by Mr. Harrison, one of the partners in the firm, and Mr. Paterson, who had been long in their employment, to act as temporary commercial agent at Labuan—an appointment the directors have since made permanent. The preliminary operations which had to be carried out before commencing to raise coal consisted of repairing the whole of the surface railways and the engine-house, altering the steam-engines and machinery, repairing the entrances to the slants, constructing a self-acting incline from the slants to the jetty, reconstructing the old jetty for shipment of coal, repairing old houses and building new ones for the Europeans and native labourers, preparing the pit for the reception of the new pumps by the *Yarra*, and opening out the old workings for a supply of coal to start the steam-engines with. A very considerable amount of work was involved in these operations, but the shareholders will be pleased to learn that by the last advices they were all completed, with the exception of the self-acting incline and the steam-engine, which only waited for some portions of machinery by the *Yarra*. The directors think that the time required to put down the new pumps and erect the machinery by the *Yarra* should not exceed two months from the arrival of that vessel at Labuan, when all should be in readiness to commence raising coal. The shareholders will be glad to learn that by the last advices from Singapore, dated April 20, the *Yarra*, freighted with machinery for the mines, had arrived at that port, and was on the point of starting for Labuan, where Mr. Harrison was to proceed to see the coal working fairly commenced. As the directors hope that the arrival of the machinery in the *Yarra* will have enabled Mr. Hunter to at once commence raising coal, they would have preferred postponing this meeting until advices to that effect had been received, but by the company's Articles of Association they were compelled to hold this general meeting on or before the 12th inst. Immediately such advices are received the directors will either publish and circulate them amongst the shareholders, or call a special meeting, as may seem most desirable. The Treaties recently effected between this country and China and Japan will give an immense impetus to the previously rapidly increasing steam navigation in the Eastern seas and rivers, and the successful working of the Labuan coal mines will most materially facilitate our commerce in those waters. The directors have engaged as consulting mining engineer in this country Mr. David Smith, who visited and reported on the Labuan coal seams. As Mr. Smith is still confident that his statements will be borne out by the working of these mines, the directors annex his original report. The directors have much pleasure in stating that, beyond the unfortunate death of Mr. McLaren, no casualty has occurred amongst the company's staff, who were working admirably, and to the entire satisfaction of Mr. Hunter, with whose energy and judgment the directors are highly pleased.

To the above report there were appended copious extracts from the letters of the company's agents in Singapore (Messrs. Middleton, Harrison, and Co.), and also of Mr. Jos. Hunter, the acting manager, which state that there are four seams of coal running across the island for upwards of 2¼ miles from Coal Point, and that they all thicken rapidly to the westward, One seam, which in the shaft is only 2 ft. thick, at a distance of not more than a quarter of a mile westward has been worked 3 ft. and 3 ft. 6 in. in thickness. Mr. Hunter says he has examined all the ravines for upwards of a mile and a half from the present shaft, and found the seams all true. He objects to the mines being worked by an English contractor, and proposes paying so much per ton or yard, as the case requires, putting the men in gangs. He expects that even with native labour (averaging 2 tons per man) a produce of from 100 to 150 tons per day can be obtained; but if the company wish to treble the quantity it can be done, at not a very great expense, by sinking a new shaft further to the north-west of present pit.

The CHAIRMAN, in moving the adoption of the report and accounts, said, as this was the first occasion upon which they had met as associated shareholders in the Labuan Coal Company it was, perhaps, necessary for him to state generally the course that had been pursued by the directors since the inauguration of the company. The shareholders already knew nearly as much of the affairs of the company as the board, for the proprietors had from time to time been kept fully informed of all the occurrences as they had taken place. Shareholders were aware that in August last the board had sent out Mr. J. McLaren, whom they had selected as a fit man to be entrusted with the charge of beginning the works at Labuan. Unfortunately, the steamer selected met with one of the most disastrous voyages which had ever been made through the Red Sea. From the extreme heat several of the passengers died from attacks of *coup de soleil*, and a large number from the same cause suffered from great prostration; unfortunately, Mr. McLaren, who had been looked upon by the board as the mainstay of the undertaking, was one of the victims. Mr. McLaren, from his previous life and the business in which he had been engaged, having superintended the construction of large works in different parts of the world, and latterly the building of the bridges over the Nile, was a man to whom the board looked for great results. By that unfortunate death the affairs of the company were left in charge of the second in command, Mr. Hunter,—a gentleman who had proved himself quite equal to the high character which had been given of him; and, consequently, the board had temporarily confirmed Mr. Hunter as the general manager. Before so doing, however, the board made most minute enquiries as to his previous character and acquirements, more especially from a personal friend, who gave satisfactory testimony to the ability and integrity of Mr. Hunter. As soon as Mr. Hunter arrived at Singapore, Mr. Harrison, the agent of the company, immediately secured means to transport the party over to Labuan, who took with them balks of timber and such appliances as were considered necessary to repair the jetty-house, and otherwise improve the plant which had been purchased from the old company. The first object of the board was to secure the comfort of their *employés*, to prevent any sickness from arising, which, from the nature of the climate, was at the outset more to be apprehended than anything else. During the necessary preliminary work, Mr. Coulson was busily engaged in making the jetty fit for shipping purposes, and he (the Chairman) was happy to say that, by the last advices, Mr. Coulson was proceeding most rapidly and energetically with that work, and they trusted to hear by the next mail, which would arrive in a few days, that this jetty was in fit working condition for shipping coal. Indeed, the present general meeting would have been deferred until the arrival of those advices had they not been compelled by the Act of Parliament to hold the first meeting within twelve months after the formation of the company, but as soon as those advices were received they would be published to the proprietors forthwith. From the fact that an alteration had recently been made in the bi-monthly mails, that monsoons prevailed at certain periods of the year, and that communication with Labuan was maintained by a trader, which departed and returned with no great precision, they could not at present expect to receive advices with that regularity and punctuality as they would when the trade of the place was more developed. Mr. Edwards, the Governor, who had done everything in his power to promote the interest of the company, had been superseded, and a gentleman had been sent down from Hong Kong to fill his place temporarily. From the communication from the Duke of Newcastle, who took the deepest interest in the undertaking, he (the Chairman) had no doubt the company would be equally fortunate with regard to the co-operation of the present Governor. (Hear, hear.) With respect to their future career, much, of course, depended upon the results that were achieved in their operations at the mines. Already they had a very large quantity of coal in view, and their intention, in the first instance, was to raise as much as they could, and so carry on their operations without calling upon their shareholders for capital. By the last mail they were advised that the *Yarra*, which was dispatched at the beginning of December, freighted with the boilers, pumps, and other necessary appliances for placing the present shaft in an efficient working condition, arrived at Singapore on April 9, and that Mr. Harrison intended to go over to Labuan to superintend their erection. But, in the meantime, he left his book-keeper, Mr. Pattison, a very able and efficient man, to carry on and keep an account of the affairs of the company. Those were the principal points of information to which he had to advert, but he might say, from all he could hear, that the prospects of the undertaking were quite equal to the expectations that had been held out. He might, perhaps, further state that a practical gentleman had arrived in this country, who fully confirmed everything that had been stated by Mr. Smith, with regard to the Labuan property, in his report which had been submitted to the shareholders. Of course, results would be the best test of those reports, but, as far as they could see, everything had been done that possibly could be to forward the work, and it was with some gratification that he informed shareholders that a friend, who had gone over the whole of the correspondence, had given it as his opinion that he himself could not have acted more efficiently in the matter than the board had done. (Hear, hear.) Upon their direction they enjoyed the advantage of the practical mining advice of Mr. Price, and also of Mr. Smith, their superintending manager. In conclusion, he stated that he would be glad to the best of his ability to afford any further information that shareholders might desire.

Mr. MACKENZIE, in answer to an enquiry, stated that the old company raised about 30,000 tons of coal, but that was, so to speak, scraped from the surface. In fact, there was a gentleman present who had been to Labuan, and who had informed him that the old company had literally scraped the coal from off the surface. But they subsequently sunk a pit, from which coal was immediately obtained. It was well known to all persons acquainted with coal mining that coal was never got in any considerable quantities from merely picking the surface, and the great object of the present company was to see some returns before incurring any heavy expenses. Another pit would then be required about a quarter of a mile north of the existing pit, and so win about 1,300,000 tons of workable coal. There were two ways of getting the coal—one was by working "slants," and the other by sinking another pit. Now, the coal was very deep to work by "slants," and if that plan were adopted the pit must be extended. But from the result of observation and experience, although it would be, perhaps, rather more expensive in the first instance, it was thought better and safer to sink a new pit. The best evidence that could be adduced as to the quality of the coal was the fact that at Singapore the inhabitants were prepared to pay the same prices for the Labuan coal as they did for the best Newcastle—that, he considered, was the best certificate that could be given of its quality.

Mr. LAYTON enquired if the coal had been proved to extend to the other end of the Island of Labuan?

Mr. MACKENZIE replied that if it should be proved that the coal extended over to the other end of the island, the Labuan Coal Company possessed, without doubt, the most valuable property in the world. The company has an exclusive right to the whole of the coal in the island, and also on the mainland of Borneo, which lay opposite to Labuan; they had the exclusive right to the coal for some 180 miles.

Mr. T. SMITH (of Ettingshall Colliery, Bilston) fully confirmed the statements he had made in his report as to the position and prospects of the property. He further stated that there was no limit to the supply of coal, which was of the best quality—in fact, as good a quality as he had ever seen. There was no difficulty in raising it, being, so far as seen, of an uniform outcrop. The only probable difficulty they might have to contend against was the interception of a "fault," but that they might never experience. At any rate, there were, at least, 1,000,000 tons of coal, perfectly level, and of as good a quality as he had ever seen. He reckoned that in about a fortnight after operations had commenced the pumps would be fixed. It was important to know that their mines were overlaid with a layer of excellent fire-clay, through which the surface water could not penetrate.

The report and accounts were then unanimously adopted, when the directors were unanimously re-elected, with thanks for their past efficient services.

The CHAIRMAN, on behalf of the board, acknowledged the compliment, and stated that the whole of the directors had the utmost confidence in the successful issue of the undertaking. He was happy to state that his friend, Mr. Periera (the principal partner in the China firm of Dent and Co.), had consented to act upon the direction, which was a matter of great congratulation to the shareholders, as well as to the directors, because from his information, his business habits, and his knowledge of the eastern trade, they would, by his assistance, be able to stand in a commanding position with regard to the markets of the East. (Hear, hear.)

The auditors having been re-elected, a vote of thanks to the Chairman and directors terminated the proceedings.

[Letters from Labuan to April 8 arrived yesterday. They were to the effect that pumping commenced on April 3. The water was still too high to see the true state of the pit. A steamer called in distressed for coal, and had been supplied with 42 tons, at $12. The health of the island was good.]

EAST KONGSBERG NATIVE SILVER MINING COMPANY OF NORWAY.

The following communication has been addressed by Mr. Lundt to the directors of the East Kongsberg Native Silver Mining Company of Norway:—

"After my advice to work the Sundse and other mines having proved so successful, I now, with more confidence, propose to the directors to order Mr. Rosbye without delay to investigate the places mentioned in the enclosed list, where silver was found between the years 1794 and 1798. There were 18 mines opened, but never worked, and as many of them were not sunk more than 1 fm. from surface, the expense of investigation would be be but trifling in comparison with the almost certain prospect of discovering at least one good silver mine. I next recommend the Kopang Mine to be developed, which is a short distance north of the Neues Gluck Mine, now in operation. The shaft at the Kopang Mine has been sunk 9 fms. My confidence in these mines is fully confirmed by the following facts:—The day upon which Messrs. Clement and Scarby, with myself, arrived at Kongsberg, four men residing close to the Kopang Mine were imprisoned for offering for sale 1200 ozs. of silver, with a promise to the purchaser to let him have 400 ozs. more. The police, however, took possession of the 1200 ozs., but the promised 400 ozs. could not be found in the forest where the sale took place. Subsequently the police discovered in the prisoners' houses crucibles which had been recently used, containing slag and globules of silver, and which we saw in the Government smelting-works. The manager of the Government mines informed us that he was decidedly of opinion the 1200 ozs. had been taken from the Kopang Mine, and upon which Messrs. Clement and Scarby immediately visited it, where they distinctly traced recent workings. I would also allow Mr. Rordam to make the necessary investigation, because being a Norwegian he will best understand the enclosed list, and be the better able to find the places therein referred to, and also men fit for the work. I calculate the whole investigation will not cost more than 100*l.* I shall be glad if the directors adopt the plan I now propose, because I am confident it will be the most successful manner of vigorously developing the property, as promised by them. If the board be unwilling to incur the expense I will undertake to pay for the investigation if it should prove wholly unsuccessful. I shall be glad if my six years' unabated energy in collecting information about the property can at any time be made useful to the company, upon the success of which I, of course, alone depend for compensating me for my outlay and loss of time. I feel convinced that, before long, it will be proved that the company possesses one of the largest and most valuable native silver mining properties in the world. It has been obtained, as you are aware, upon the most liberal terms, with perpetual possession, at a royalty of 96*l.* per annum.—J. H. LUNDT."

MINING IN AUSTRALASIA—MONTHLY SUMMARY.

MELBOURNE, APRIL 25.—Notwithstanding the wet weather experienced during the past month, affording a plentiful supply of water to the miner for washing up purposes, the escort returns show a considerable falling off, in the aggregate of upwards of 10,000 ozs., on the first quarter of the year, thus in some measure damping the confident feeling previously entertained that we have seen the lowest yield of gold in last year's return for years to come. Some apologists attempt to account for it in the following manner—that large quantities of gold are being held back in anticipation of the repeal of the gold duty of 2*s.* 6*d.* per oz., a bill for that purpose having passed the second reading, and will very shortly pass the third. If this should be the case, no doubt but next month's returns will show it.

The Mountain Creek district has assisted the Avoca returns very materially, yet not so largely as we were led to expect from so many men as are now located in that district alone. The last new rush was to a spot about two miles from the Mountain Creek, on the road to Navarre, where a fair, but not a rich, deposit was obtained. The sinking is about 12 ft. in very hard ground; not more than ⅛ oz. to the load was obtained, but with a good thickness of wash-dirt, and shallow sinking, the prospects were considered sufficiently good to induce a large number to commence sinking.

Another new lead has been found near the road from Chiltern to Wahgunyah, and about ½ mile from the Cork lead. The depth of sinking in the prospectors' claims is 214 ft., and their prospects were at the rate of ¾ oz. to the load, with 2 ft. wash-dirt; it is to be called the "Mona Lead," and is expected to join the Great Northern, or some one of the other leads of that series. The last accounts from the Woorragay field are good; but the best alluvial ground is in private property, and the demands of the owner were considered rather exorbitant.

Mining affairs have been very dull at Morse's Creek, but a new and rich reef is reported to have been found. The crushing charges are to be reduced, so as to allow of much of the poorer stone being operated upon.

From Inglewood some yields of the old and most encouraging kind have been announced from the Columbian Reef: 61 tons from Wright and Heron's claim, producing 1350 ozs.; of this 896 ozs. was the return of 15 tons, or nearly 60 ozs. per ton; the balance yields at the rate of 10 ozs. to the ton, of which quality there were 200 tons more ready for crushing. From another claim 204 tons, taken without selection, yielded 855 ozs. Among the trial lots was one of 2 tons, from a claim on the Inglewood Reef, which yielded 24 ozs. 19 dwts. Altogether, the prospects of Inglewood are much brighter than they have been for some time past.

The rush to Murphy's Flat, five miles from Dunolly, is beginning to assume an aspect of much importance. This flat was first tried by a prospecting party, assisted by the public funds, but although they found gold on different parts of it, they did not hit upon any deposit of an encouraging character, apparently because they did not go through a false bottom found in every part of the flat yet tried. Others were induced to pierce this false bottom, and the result is the opening of what promises to be an extremely rich and extensive field.

Further discoveries of good stone have been made on the Yondrit Reef, and imparted more animation to the district. The claims near the prospectors on the Glamorganshire Reef are now busily worked, and in at least four of these traces of rich veins of stone have been struck.

Much of the ground at the Pickpocket Diggings is about to be worked by companies, as machinery is required for a great part of what remains untouched.

Of the companies working on the Ballarat deep leads, the Great Extended, on the Redan, divided 1200*l.* among the shareholders last week, and having been fortunate in finding several nuggets on Saturday and Monday last, the amount to be divided this week will be much larger.

The accounts from Crooked River and Shady Creek diggings, in Gippsland, continue of the most satisfactory character. The diggers at the former of these have now extended themselves into branch creeks, and some ground has been opened which gives very fair prospects. The greater portion of the first settlement is now in full work, and the quantity of gold which the sluices yield is more than even the miners themselves anticipated. Flour continues high on these diggings, from 75*l.* to 80*l.* per ton, and other articles in proportion. The difficulty of access, and the length of the journey to these diggings, will always act as a preventive to their being overrun with idle loafers, who are such nuisances on other gold fields.

The event of the month, so far as the gold fields are concerned, has been the attention which has been paid to several new discoveries, having for their object the utilisation of "tailings," as quartz from which the gold has been partially extracted is termed by the gold miner. In our last summary we gave an account of Mr. Porter's patented process of abstracting gold from quartz by amalgamation, from which so much was then expected. Repeated trials of this process have since been made with more or less success, and one or two other processes have been brought into competition with it.

Some time ago we advised that the sum of 50,000*l.* had been voted for the construction of reservoirs, to afford a constant supply of water to the gold fields, and our Legislature has just voted a further sum of 75,000*l.* for the same purpose; there is, also, a motion before the House to raise a sum of 1,000,000*l.* sterling, by yearly instalments of 250,000*l.*, or extending over four years, to be appropriated in the same manner. Two reservoirs are completed near Arrarat—the one in Oliver's Gulley is a stupendous undertaking, and has been carried on with considerable zeal and ability. The drainage is 840 acres of mountains and gullies, which usually send down large volumes of water when rain and

storms visit that district. This reservoir is 60 chains from the centre of the town, and has an elevation of 10 ft. above the Post-office. It will contain, when full, 19,615,554 gallons. The second reservoir is in Opossum Gulley, about four miles from Arrarat, which will prove very beneficial to the numerous diggers in that locality; its drainage area is 960 acres, and it will contain 24,621,547 gallons of water.

C. LEICESTER AND Co., Consulting Mining Engineers.

ADELAIDE, APRIL 25.—The advices sent home by this mail will doubtless contain, as usual, great complaints of the excessive quietude of the times and the dulness of nearly all branches of business; and, no doubt, with great cause, for though in some matters considerable improvement has been exhibited, yet, as a whole, mercantile business is very flat. In the mining portion of the community, however, there has been excitement enough. New discoveries have been made in several directions; mineral leases (of 80 acres each) have been freely taken out, and new companies brought before the public, many of which are now formed and considerable works in the process of being commenced. When these get fairly under way it may be hoped that trade will receive an impetus and business assume a livelier aspect. The price of copper has been dropped 2*l*. per ton, being now 93*l*. Metals of most kinds are plentiful. Galvanised iron is in fair enquiry, but is mostly damaged on the voyage out. A discovery of coal, which it is expected will prove important, has recently been made at Coleraine, in the Portland district, a small specimen of which has been left at our office by a gentleman who has just returned from the place. A vein was first cut about 18 inches wide, and, lower down, another vein 2½ feet wide. At a still lower depth it was anticipated that a larger vein would be discovered, in accordance with the usual series of the carboniferous strata. Should an available coal field be opened so near our own territory it cannot fail to be of considerable importance to us, now that the development of copper in large quantities will render smelting on a large scale indispensable.—*South Australian Register*.

FOREIGN MINES.

GREAT BARRIER COPPER MINE.—The directors have just received by the mail from New Zealand a full and very important report from Captain Holman, who was specially engaged to inspect the mine. It is too long to give entire, but we have much pleasure in drawing attention to the following particulars:—A great space of orey ground is available for stoping above the adit level; and, assuming it to yield ¾ ton of copper ore per cubic fathom, and to average only 4 fms. wide, it will yield 3 tons for the whole width of the vein; it is, consequently, probable that over 3000 tons of ore, of fully 15 per cent. for copper, is available in the section, most of which I think could be stoped for 12*l*. per fm. the whole size of the vein. By adopting such a system of stoping on a much larger scale than hitherto, both above and below adit, by a force of about twenty miners and forty labourers, it would, I confidently believe, return sufficient ore to meet the expenditure of the mine. A force of six men of the above number could be placed partly to drive the adit level south—a very desirable object—and the remainder to drive the 12 and 22 fm. levels; but the principal test for proving the mine in depth should mainly depend on the stoping. With the above force for mining, and a corresponding staff on the ore floors, I consider about 50 tons of ore, of 15 per cent., could be raised monthly, or 2 tons per working day, at a cost on the local establishment of from 500*l*. to 550*l*. per month, exclusive of freights, insurance, sales of ore, &c. Any increase of ores in the stopes would, of course, go to the profit account. . . . In conclusion, I may state that the mine may yet be said to be of a speculative character on the whole; still there is a proof shown by the deeper explorations that the ores are not merely superficial, but that it is a vein that will evidently continue in depth; and if only a permanent increase in the yield of ores takes place throughout the vein, such as seen in the 12 fathom level, where the quality of the ores is quite equal to the general shipments, the future value of the mine would be very great; and, whatever course of action is determined on by the company, the mine fully warrants an extended trial. Captain Trewen writes, under date March 2, that there were about 60 tons of ore then ready for shipment.

GREAT NORTHERN (South Australia).—The advices from the local committee are dated Adelaide, April 26: They state—"You may readily imagine the pleasure it affords us to announce to you the settlement of the question of section No. 105, the Messrs. Chambers having executed a n assignment of the lease to the company, which is duly registered, and thus this important matter for the company's interest is set at rest, without cost to the company, an event which the committee feel sure will be hailed with gratification by the shareholders, and inspire confidence in the increased prospects of prosperity to the company. We have now the pleasure to hand you bill of lading of 95 tons of copper ore, shipped per *Dover Castle*. We have further to inform you that there is now at Port Adelaide 50 tons of copper ore, which we have just arranged to send per *Suffolk*. The number of drays offering, and likely to do so, for the cartage of ore to Port Augusta will meet the requirements of the company." Capt. J. B. Pascoe reports (Nuccaleena, April 11):—"We have no south wall of the lode in the middle adit as yet, and are still cutting south. We have the wall of the lode in the deep adit, good for ore. The lode on the north part of section 2 is taken away for ores; here we have cut in south 12 ft., through a lode of gossan and copper ore, of good quality, standing whole to the surface; this ore underlies south, and I think it will go through the mine. The lode in section 5, below 2, is 4 ft. wide, composed of copper ore, of good quality. The lode in section 3 is 3 ft. wide, composed of gossan and copper ore. The lode in section 6 is 3 ft. wide, composed of copper ore. The lode in section 7 is a good course of copper ore; width of the lode unknown. The lode in section near No. 7 is a good lode of copper ore. We are progressing with our ore-floors, and shall now go on dressing ore without interruption, as we have plenty of water for dressing purposes. We have now about 200 tons, dressed and undressed, at the surface. The next 100 tons we shall send down will be the best sent yet. Five drays have arrived here during the week, and 17 more are on the road up. We shall send men to the Mooroo Mines to dress up the ore there to load the drays back with ore, and hope to send down a large quantity of valuable ore from those mines."

NORTH RHINE.—Capt. Pascoe, April 26: The lode in the 43 fm. level is about 9 ft. to the east of the engine-shaft, and is driven on for about 55 fms. south and about 5 fms. north of the shaft; the lode is from 3 to 6 ft. wide, composed of quartz, iron pyrites, and copper ore. It is very much improved in the last 10 fms. sinking; at this depth the ore is in greater quantity, and formed in body more like runs of ore than in any of the levels above, and looks as if this is the point where a run of copper ore of importance begins to form; this is the richest level in the mine, and is full of encouraging prospects. About 39 fms. south of the engine-shaft, in the bottom of the 43, there is a good lode of black sulphuret of copper ore. I think the prospects will improve as you go down; here the lode is going through the eastern part of the white sand grit. The 43 cross-cut is driven east about 43 fms. from the engine-shaft, through very good ground for producing ore. I beg to urge upon you the necessity of sinking without delay your engine-shaft deeper, and extend your levels south of the engine-shaft with all speed, as this is the main point of your prospects. Had you three or four levels like your 43 you could raise (say) 300 or 400 tons of ore per month. There are about 30 tons of copper ore at surface.

WORTHING.—April 19: The shaftsmen have been engaged putting in another cistern by side of the one that was in before. When this was completed I set the men to sink Legg's engine-shaft to the 43; the lode in the bottom of the shaft is from 3 to 6 feet wide, composed of good yellow ore and quartz, with a portion of mundic, giving about 7 to 8 tons to the fathom. The ground is about the same as it was last month. The water has not increased during the month. The engine keeps the water by working about 5 strokes per minute. The 33 cross-cut east is driven about 30 fms. from shaft. We have found our cross-course to run very regular and well-defined, making a little larger as we drive east. We calculate to have about 15 fathoms to drive to cut Boundy's lode, which we shall accomplish in about two months if the ground continues of the same character; ground opened during this month in this end 7 fathoms. The 33 south has been driven this month 3 fathoms; in driving this end we only carry a small portion of the lode. This we find the best way, as the lode is very hard, composed of yellow ore, coated with black, of good quality. The 23, south of Hocking's shaft, has been driven 14 feet this month; lode small, from 6 inches to a very small vein. We have commenced a winze 4 fathoms back from this end; it is now down 7 feet, and we have come to water; the lode is 4 feet wide, and gives 7 tons to the fathom; harder than when we began, but quality just the same. We have now put the pare to stope in the 23, nearer Legg's engine-shaft, where the lode is about 6 feet wide, and gives 4 or 5 tons per fathom. In the 12 fathom level No. 1 winze is down to the 23. In sinking this winze from the 12 we have had the best lode I have ever seen in the colony, and in the bottom it is larger than ever; it gives 10 tons per fm., and is from 7 to 8 feet wide, and neither wall as yet in sight. Here are hundreds of tons of good solid ore to stope. No. 2 winze is as deep as No. 1 within 3 feet; we have had a good lode in sinking all the way; lode 3 feet wide, gives about 7 tons per fathom, and is of the same quality as No. 1, and still continues good going down. Ore sampled and weighed during the past month—Carbonates, 30½ tons; rough yellow ores, coated, 23½ tons; smalls, 40 tons: total, 94 tons. Regulus shipped per *Donald McKay*, 32 tons. Ore and regulus on hand equal to 37 tons copper. Smelting and dressing operations going on well.

SCOTTISH AUSTRALIAN.—April 22: At the Good Hope Mine the sinking of Dickson's shaft, for the purpose of driving on and cutting the lode at the 30 and 40, had been continued during the month. The mining captain reports—"The shaft has been sunk about 16 ft. since I last reported; the present price of the ground is 25*l*. per fm. The country continues to be of the same character as heretofore, and there appears to be a slight increase in the volume of water." Mr. Morehead, the superintendent, writes as follows:—"I have been again to visit this property, and found matters there progressing in a very satisfactory manner. Dickson's shaft, which I descended, seems a very good piece of workmanship, and we propose now to push it down by a series of small contracts, and to be guided as to driving to cut the lode by the state of the water; that is, we shall continue sinking until we find the quantity of water more than can be readily dealt with by the whim. At present we have plenty of spare power. As we approach the lode we may expect to cut leaders or branches, which will increase the water in the shaft. The little increase mentioned in Mr. Barnes's report is due to such a circumstance." Respecting the coal field to be worked by the company, Mr. Morehead states: "I hope to be very soon indeed actively engaged in carrying out this highly promising undertaking. I may mention that Wallsend Coal Company shares stand at 25 per cent. premium."

KAPUNDA.—April 25: In the 60 fathom level the shaftmen had driven 10 fathoms north of Bagot's shaft, on the course of the lode lately cut, which is good, and is expected to supply a large quantity of ore when laid dry. It was hoped shortly to have the mine drained to, and all the lodes cut in, the 60 fm. level, so that the tributers would be enabled to raise ore from below the 50 fm. level. The February ores proved 266 tons 13 cwts. 3 qrs. of 18·665 per cent.; average produce equal to 49 tons 15 cwts. 1 qr. 19 lbs. of pure copper. The yield for March was estimated at 280 tons of good percentage. Since last advices (March 25) the furnaces had all been put into thorough repair, and were again in full work: 30 tons of copper had been shipped, per *Norfolk*, from Melbourne to London, and 20 tons forwarded, per *Oscar*, to Melbourne for transhipment.

ENGLISH AND AUSTRALIAN COPPER.—April 26: There were nine furnaces, besides refineries, at work. The stock of coals at the works was 3429 tons, of firewood 5001 tons. The quantity of coal at Kapunda was 980 tons. The company's operations were proceeding satisfactorily.

PORT PHILLIP AND COLONIAL GOLD.—April 25: The quantity of quartz crushed in March was 2309 tons, yielding 1548 ozs. 14 dwts. gold, or an average of 13 dwts. 9 grs. per ton. The receipts on Clunes account during March was 3571*l*. 4s.; expenditure, 1364*l*. 0s. 10d.; leaving a profit of 2207*l*. 3s. 2d. The machinery was all in good working order. A remittance of 2000*l*. has been received by this mail.

WHEAL ELLEN.—April 25: Mr. Abraham Scott, of Adelaide, writes—"Since my last the operations of the mine have been carried on very satisfactorily, and I feel every day more certain that it is a good purchase for the company. The supply of water in the mine is now beyond all question amply for its requirements. Mr. Scott adds that they would soon be prepared to operate very extensively as well as profitably, and that they could at once make large shipments of ore, but are convined that such a course would involve a great sacrifice of profit, and that they consult the interest of the company by confining operations to narrow limits until preparations for smelting in the colony, the whole produce of the mine are completed."

From the Chairman of the local committee—"The reports from the mine show that the men are employed in driving levels and laying open more ore ground, none of them being engaged in breaking ore in the ground now laid open. Until further facilities for dressing, calcining, and smelting the ore are available it would be of no service to raise the ore in larger quantities than is now being done in driving the levels. The lode in the 20, driving north from the new shaft, is in entirely new ground; the quantity of ore raised in driving this level by four men is estimated at 70 tons. The lode is 12 feet wide, 6 feet of it good spar and galena, good stamps work, and the other 6 feet in mundic and galena, similar to the ore in the shaft. You will see by the plan originally sent home that this ground is marked as mundic, and no credit was taken for the large mass of ore that is evidently lying between this shaft and the Corkscrew shaft."

BON ACCORD.—William Jeffery, April 24: Engine-shaft: The ground is still very favourable for sinking, with a great deal of mundic. We cut the west wall of the lode in the 40 last night. The lode underlying about 20 in. in the fathom, and find it very large, being from 20 to 22 ft. wide; a splendid looking lode. I have put the men to drive north on the lode; set 2 fms., or the month, at 14*l*. per fm.—Jeffery's Shaft: The ground is much the same in the 22 cross-cut west as last reported.

April 26: We have driven north on the lode 4 ft.; this part 8 ft. wide, composed of malleable copper, black, red, crystallised, green, yellow ore; a fine lode, far richer than samples last sent. Large quantities of mundic still in the engine-shaft.

COPIAPO.—DULCINEA MINE: Estimated produce for April—First-class ore, 70 qtls., 30 per cent.; second-class, 170 qtls., 18 per cent.=240 qtls. The lode in No. 1 chiflon north is still producing about 1½ ton of 17 and 25 per cent. ores to the fm. The lode in the stopes in bottom of the 30 is producing about 2½ tons of 18 and 30 per cent. ores to the fathom.—A. ANTHONY.

CHECO MINE.—Estimated produce of ores for April:—First-class, 32 qtls., 35 per cent.; second-class, 116 qtls., 17 per cent.; third-class, 416 qtls., 14 per cent.=564 qtls.—Price's Shaft: The lode in the chiflon sinking under the 50 west is 2 ft. wide, of a kindly appearance, but of nothing to value. The lode in the 50, driving east of the winze, is 2 ft. wide—poor. The lode in the same level west is 15 in. wide—poor. The lode in the 40 west is producing about ½ ton of 17 per cent. ore per fm. The 40, driving west on middle lode, is poor. The lode in the 30 stopes, on north lode, is 20 in. wide, producing ores of 12 per cent. The 20, driving west on the middle lode, is a little improved, and is worth 1½ ton of 17 per cent. ore to the fathom. The lode in the chiflon sinking at the western part of the mine is 3 feet wide—poor. No. 1 chiflon, sinking under the 10, is poor. The lode in No. 2 chiflon, sinking under the 10, is 2 ft. wide, producing some good stones of ores.—Cole's Shaft: The lode in the shaft sinking under the 20 is 2 feet wide, producing some rich stones of ores. The lode in the 20 east is 18 in. wide—poor. The lode in the same level west is 20 in. wide—poor.

LUSITANIAN.—Under date June 5, the agent writes that in the Palhal Mine, the lode in Lauranco's winze, below the adit west of the Calma, is 9 in. wide, producing stones of rich grey and green carbonate of copper ore. In Carvalhal Mine there appears to have been no remarkable change.

EAST KONGSBERG.—Report for May: Sundse: This mine lies about a quarter of a mile from the River Langen, close to the River Ramberg, and is sunk to the depth of about 1 fathom from the surface. Running east and west, and at a distance of 1⅛ fathom from each other, are two veins of calcareous spar. The southern vein is only what is called in this district "a drum," that is, a vein less than an inch in width, and is at present yielding a little silver; the north vein is 3 in. width, and is also giving silver. We are sinking upon the course of these veins, and carrying the sink 1½ fm. square, to enable us to follow both veins downwards. The fahlband, which is traversed by these veins, is highly mineralised, and, on the whole, the prospects of this mine are favourable.—Ramsund: This mine lies about half a mile to the north of Sundse, and near to the large mine Anna Sophia, which yielded so much silver in former times. The mine is sunk 12 fathoms from surface, upon a vein averaging 3 in. in width. We are driving west on the course of this vein from the bottom of the sink, but it is at present unproductive. We are also stoping the same vein to the east of the sink, and there it is giving silver and sulphurets of zinc and lead. About 7 fathoms from surface a cross-cut had been driven by the ancients southwards, for the purpose of intersecting a parallel vein; this cross-cut was resumed last year, and the vein having been cut, a level was driven west upon its course for a couple of fathoms, but with no satisfactory result. We have, consequently, suspended the driving in that direction, and set the men to follow the vein east. The vein in the present end is of average width, and is well worth further trial, for experience teaches us that should it cross a good strong fahlband it is sure to give silver.—Neues Gluck: This is the most easterly of the group of mines which have hitherto been taken up by the East Kongsberg Company; it lies on the top of a hill, about 2000 feet above the level of the sea. Some time before the mine was abandoned by the Danish Government an adit had been driven several fathoms, for the purpose of unwatering the mine, &c.; this adit was resumed last year, and is at present being driven. Since commencing the driving of this adit it has been discovered, by means of an old chart or plan, that a caunter adit from the mine to meet the main adit had been commenced. On making this discovery no time was lost in getting tackle prepared and hung at the mine, and we are now engaged, night and day, in forking the water preparatory to resuming the driving of the caunter adit. The importance of this discovery need hardly be pointed out to you, for not only will the work be finished in half the time, but the water from the mine (which was issuing from the fissures in the rock, and hindering very much the driving of the adit) will give us no further trouble. I presume you are aware that all adits in this district are driven by fire. Within the last week, in forking the water, we have exposed the pumps which were used for unwatering this mine, and their size and fixings (pitwork) showed us that a machine was employed in former times for working them. On searching the side of the mountain we discovered the water-wheel, pit, and leats. The wheel-pit is at a considerable distance from the mine, and the connection between the pumps and the engine was by means of chains or flat-rods. The ancients having used water-power at this mine, of course there is nothing to prevent us doing the same when the mine has advanced to that stage to be required. The fahlbands at Neues Gluck are very strong, and several promising veins are to be seen crossing them at surface; we are trying some of them, and the result shall be duly communicated to the proprietors.—Anna Sophia: We have lately commenced to clear out the adit level leading into this large mine, and when this job is done we intend to lay down a tramway in it. This adit level, which is upwards of 100 fathoms in length, leads not only into the principal mine, but also, by means of a cross-cut, into the east mine, or Skjorp of Anna Sophia. We propose to resume the working of this latter mine as soon as possible, and also to try some of the veins in the large mine itself. With respect to the stamp work, I am advised by some of the most eminent men here that to erect a water-wheel to drive them would only be a waste of money, and that the best thing the company could do would be to sell them for what they would fetch. Director Sell said, "that whoever made them did not known the hardness of the Kongsberg gneiss." However, if, after hearing this opinion, the board wish a water-wheel erected it shall be done; the cost will be about 10*l*. or 12*l*.

CLARENDON CONSOLIDATED.—Josiah Martin, May 21: Stamford Hill Mine: The lode at the shaft sinking below the 82 has not been taken down since I last wrote; the ground is a little harder for sinking, and a little more water coming from the north side of the shaft; we have about 4 ft. more to sink to be deep enough for the 94. The lode in the 82 west, on north part of the lode, is about 3 ft. wide, composed of red clay, oxides of iron, and white prian, with quartz; the lode about this place appears to be disordered by a small cross-course. I have put two men from this level to rise in the back, where the lode is 3 ft. wide, worth ⅛ ton of ore per fm.; we shall, by putting up this rise, prove the pieces of ground between the 82 and the 70; this I spoke about in my former reports, when I stated that if the lode cut in the 82 continued we should not be long before we should raise ore enough to pay the working cost; but, as you are aware, we have first to drive the level, and then to make a rise or sink a winze, so as to make the ground available for taking away at the cheapest rate. The lode in the 70 west, on south part of the lode, is without any alteration; we have in the end at present a small porphyry dyke, or what we call civan course; these cross the lode; we have met with some two or three in this level; we can trace them at the surface, where the lode takes the hill. In the 46 south, west on new lode, the lode is about 3 ft. wide, consisting of gossan and oxides of iron, with a great deal of white prian, and sometimes green carbonate of copper—a very kindly looking lode for this depth; we have a great quantity of water coming from this end. We have had a very rainy season, which has put a stop to all surface work for the last week. We are pushing on the dressing with all possible speed, and are now about to commence the bucking. The men are all at work again, and the engines and pumps are working well. In the Gold mine the two men have broken the 3 tons of gossan; the lode from which they broke it is very large, and as soon as I get the result of the assays I shall say more about it. In raising the gossan at Gold mine we broke some copper ore samples, which I have forwarded, and should it be found to pay I will send it home with the ore taken from Stamford Hill, but in different barrels.

CENTRAL AMERICAN.—April 27: In handing you our usual monthly report, we have great pleasure in stating that the mines generally are looking very encouraging. In San Pantaleon, Cornubia engine-shaft has been sunk by nine men, about 2 varas, at $65 per vara; the lode in this shaft is 2½ ft. wide, composed of a rich looking gossan, intermixed with that congenial calc-spar which so invariably leads to rich deposits, and is at present producing a little silver ore of rich ley.—San Vicente: In Alvarado's stope, in the back of this level, the lode is about 2 feet wide, composed of flookan, mundic, and silver ore, producing of the latter from 3 to 4 cwts. per fathom.—San Damasio: The lode in No. 6 stope, in the back of this level, is from 2 to 3 ft. wide, presenting a most promising appearance, now worth about 4 cwts. of good "broza" per fathom.—Dolores: The winze sinking from this level, east from Taylor's engine-shaft, has been sunk by six men, 5 varas, at $12 per vara, and is now down to the depth of the level below (San Juan), but the end is not quite forth as yet. In this winze the lode is 3 feet wide, well defined, and regular in its bearing, chiefly composed of flookan, mixed with calc-spar and iron pyrites, with occasional pockets, or small deposits, of rich silver ore, and presents every indication of soon becoming more productive. During the month another winze has been commenced from this level, which is situated east from Cornubia engine-shaft, on the eastern side of No. 2 cross-course, where six men have sunk 5½ varas, at $6 per vara; in this winze the lode is 3 feet wide, and has produced for this distance more than 3½ tons of rich ore per fathom. I have made very careful assays of the ore extracted from this "pozo," which gave me the following results:—No. 1, sample of first quality ore taken from 6 tons, 447 ozs. 4 dwts. 3 grs per tons No. 2, sample of second quality ore taken from 4 tons, 250 ozs. 11 dwts. 1 gr. of silver per ton of ore. From which it will be seen that the lode at this point is worth at least 300*l*. per fathom. This winze, which is called No. 1, east of No. 2 cross-course, is immediately under No. 2 stope, in the back of San Damasio level, from whence there were so many tons of this high quality mineral returned, and which goes to prove that this rich shoot of ore continues, and, to all appearance, improves in depth.—San Juan, or the 10 fathom level under Dolores: The cross-cut north, driving towards the main lode, east from Cornubia engine-shaft, on the eastern side of No. 2 cross-course, has been driven by six men, 6 varas, at $11 per vara. At this point, we are sorry to state, the water came away in such torrents through the country rock from the lode that our engine, with the present size pitwork, is unable to keep it. The pitman is now engaged in rearing up from San Juan to Dolores level a new column of 5¼-in. lifts. There were 50 tons of ore raised and dressed in April, averaging 217 ozs. of silver per ton of ore.

May 7.—The discovery of a splendid course of ore in the new winze now being sunk east of No. 2 cross-course in Dolores level, San Pantaleon Mine, is the most important feature of the mining news. Yesterday morning I was underground in the mine, and had the great satisfaction of examining the lode in the winze referred to, where exists a course of ore such as has never before been witnessed here. At the lowest estimate it is worth 300*l*. per fm.; nearly 5 fms. of ground are exposed, and there is every reason to hope that down to San Juan level, 5 fathoms more, the lode will continue highly productive. Indeed, it would appear from what we have already seen, that the shoot of ore which produced such rich returns in the stopes above, becomes still richer as it descends. The 10 fm. back, therefore, from the cross-course on No. 2, San Juan level, to that of No. 3, same level, will undoubtedly prove a most valuable piece of ground. The stopes generally are yielding fair quantities of ore. The improved appearance of the lode in Cornubia shaft still further strengthens the belief that the San Pantaleon lode will improve in depth. The returns of best ore from this mine will now, I trust, continue to increase. I shall use every exertion to send as much away for shipment to England as existing circumstances will allow.—Santa Rosalia: In this mine the different operations are being advanced with all speed. The productiveness for silver of the ore extracted from the winze has increased: an assay recently made gave 114 ozs., and contained but a small proportion of lead.

San Antonio: Two new levels have been commenced in this mine at the bottom of the new shaft east and west; we have every reason to hope that by this means ore ground will be opened up. The lode in the level of San Luis (adit) presents a truly flattering aspect; it is 4 ft. wide. There can be no doubt that the flookany and gossany matters contained in this lode, although giving a low assay, from 20 to 30 ozs., being impregnated, however, more or less, with the chloride and sulphuret of silver, will pay well for dressing. At the Hacienda de San Jose sundry disarrangements of the machinery, and the want of a full complement of hands, have impeded the charging of the barrels. In a short time, however, when the additions and improvements mentioned by Mr. Berger shall have been completed, I do not doubt but that a daily charge of the eight barrels will be made. Even as we are now working, I hope to be enabled to avoid drawing on the company for the funds needed for our expenditure.

Mining Correspondence.

BRITISH MINES.

ABERDOVEY.—The stope on the main lode, in the 32, is improved, and producing fully 1 ton of ore per fathom. The stope on the south lode is also improved, and now producing about ¾ ton of ore per fm. We have removed the men from the stope on the south lode in the 22, to assist those in the 12, where they are breaking some very good work. The men now engaged in the stope on main lode in the 22 are raising some good ore. The surface and dressing departments are being pushed on will all speed, although the scarcity of water is against us against us in sinking the shaft.

ALFRED CONSOLS.—S. Uren, T. Hosking, June 12: The main lode in Davey's engine-shaft, sinking below the 150, is 4 feet wide, composed chiefly of capel and spar. This lode in the 150, driving east of the above shaft, is 4½ ft. wide, producing stones of ore. This lode in the 140, driving east of said shaft, is 3½ feet wide, containing good stones of ore, but not to value. The north part of the main lode, driving east of Roberts's stope at this level, is from 1 ft. to 18 in. wide, worth 12*l*. per fm. The 130, driving east of said shaft, is 3½ ft. wide, worth 6*l*. per fm. This lode in the 120, driving east of the above shaft, produces occasional stones of ore. Roberts's stope, in the back of the 140, is worth 12*l*. per fm. Hosking's stope, west of No. 2 winze, in the bottom of the 130, is worth 15*l*. per fm. Floyd's stope, east of said winze, is worth 25*l*. per fm. Nothing new in any other part of the mine for the past week.

BALLYVIRGIN.—T. De la Hunty, June 6: We have dressed and put to pile 1 ton of first crop lead ore, 1 ton of second crop lead ore, ½ ton of first crop copper ore, 1 ton of third crop copper ore, 1 ton of coppery raggins, and prepared for the crusher 3 tons of lead ore.

BEDFORD CONSOLS.—Capt. Mitchell, June 13: In the middle adit level, on No. 1 south lode, the men are driving by the side of the lode. In the cross-cut south, towards the great south lode, the men are making good progress. The tributers' pitch in back of the 27 has improved a little; the lode is worth 8*l*. per fathom.

BEDFORD UNITED.—J. Phillips, June 11: The lode in the 115 west is 2 ft. wide worth 3 tons of ore per fm. The lode in the 103 west is 3 ft. wide, worth 3 tons per fm. Yandell's and Manuel's stopes, in back of this level, will yield respectively 4 and 3½ tons per fathom. Woolcock's stopes, in back of the 90 west, are worth 3½ tons per fm. The lode in the 70 rise is unproductive. The lode in the 58 east is 15 in. wide, producing nothing to value. The stopes in back of this level are worth 2 tons per fm. The lode in the 47 west is 18 inches wide, unproductive. The stopes in the 47 east are worth 2 tons per fathom.

BICKLEIGH VALE PHŒNIX.—J. Hambly, June 12: Since our managing director left the mine we have cut the cross-course in the adit level; I have opened on it from 6 to 8 ft., this will assist us much in going forward. I expect to finish driving the 2 fms. set on the pay-day by next Saturday, we shall then be able to set at a reduced price, if the ground continues as it is. I hope to-day we shall get past the hard lode of elvans and capel, which has caused so much delay in driving. At present the cross-course is small, but soft.

BORRODALE (Cumberland).—W. Dixon, June 14: The workings on Thompson's pipe are being continued by four men, and we have also four men driving a cross-cut at Royde's stage to intersect the waddy pipe we sunk on at the stage above, called Charlton stage. From these pipes we have obtained the 150 lbs. of first-class black lead which you have at the company's office, and which, with what we have at the mine to dress, will make the monthly produce for the last four months upwards of 40 lbs. per month, of first quality; in addition to which we have obtained from these workings about ½ ton of second-class quality wad. Having now completed the filling up of about 50 yards of the lower portion of the grand pipe excavation, we are enabled to attack this part of the mine at those points (by an outlay of a few pounds for timber) from which we expect to obtain a considerable quantity of wad of the very best quality.

BRONFLOYD.—J. Lester, June 12th: The cross-cut north from the 15 below adit, on No. 4 lode, is through that lode into the country, and we have now very good ground for making progress; it is being driven forward by six men, at 11*5*. per fm.: I calculate we have about 8 fms. yet to drive to intersect No. 1 lode. In the 17, on No. 1 lode, I have set the sinking of a winze to four men, 4 fms. or the month, at 75*s*. per fm.; I shall be better able to report as to produce in my next, but it is evident to me the tungstate of lead in this level arises from the ore below; and, as a proof, the ground in bottom of the 17 has yielded much better work for its whole length than the upper or middle part of the drivage, while for the last 4 or 5 fathoms the leaders of the tungstate of lead (which in some places are 18 inches wide and solid) have come from below, and extend to the top and upwards above the crown of the level: at other places, on the south side, this mineral fills every cleavage of the lode—stones with fine threads of crystallised prisms. I expect this winze will develope a fine lode, and as we have 23 fms. of whole ground between it and the point where the cross-cut just referred to will intersect the lode below, it will in my opinion open out most productively. The 17 I have set to two men only, to drive forward at 35*s*. per fm., for being uncertain how far this new mineral extends it may be dangerous to open ground too fast over the point of the winze. The south side and sole of level is yielding capital silver-lead ore, while the forebreast and north side, is full of this tungsiate of lead. I have sent up a box of specimens, as you directed when on the mine.—No. 4 Lode: I have set four men to drive south over the larxe stope, and west of slide, at 80*s*. per fm., and I expect to make a discovery here.

BRYNTAIL.—J. Roach, June 13: The lode in the 10 east is about 6 in. wide, consisting of clay, quartz, and spots of lead ore; the present indications lead me to expect an alteration for the better. The stope in back of this level during the last day or two has been better than usual; some excellent slabs of lead ore are being broken from it. The 25 cross-cut is progressing favourably, but we have again a hard stone in the back of this level: I am hoping this is nothing but a boulder. I will let you know the result of further development in my next.

BRYN GWIOG.—J. Lloyd, June 11: The lode in the engine-shaft has fallen off considerably since last advised, owing to a bed of mixture of chert and limestone appearing, which has disarranged the lode, and caused it to be very hard and poor for lead just now, but we expect it to last but a few feet. The stope under the 132 east is similar as when last reported, and is worth about the same for ore, from 2 to 3 tons per fathom. The 132 west is improving, and is worth from 10 to 15 cwts. of ore per fm. The stope above ditto, and east of No. 1 winze, is worth from 2 to 3 tons per fm. The No. 3 winze is down to the water, and cannot be taken down until No. 2 is holed to the 132 to drain the impediment. The stope east of this winze is yielding a trifle of ore, and the ground more kindly. We have sampled 24 tons for next Thursday's sale.

BULLER AND BASSET UNITED.—G. Reynolds, June 13: The lode in the 100, both east and west, is fully 4 ft. wide, and composed of a good looking spar and peach, impregnated with spots of copper ore and mundic; these two points we shall drive on with all speed, when we hope to meet something good. In the 80 west the lode is about 2½ ft. wide, composed of the same congenial spar, and spotted with copper ore. The lode in the 80 east is of much the same character, and all the machinery is in good order.

CARADON CONSOLS.—W. Rich, June 11: We have not yet set to sink the winze in the bottom of the 54, as the men will be engaged for a few days in clearing up the level, and taking up water. Good progress is being made in sinking the shaft. No lode has been taken down within the past few days, consequently there is no alteration to notice. The cross-cuts north and south at the 54 are progressing satisfactorily through congenial-looking granite.

CASARA UNITED.—S. Harpur, June 13: The lode in the 30, north of engine shaft, still continues good, producing the same quantity of lead per fathom as last reported—1 ton per fm.; we have driven 10 fms. throught this shoot of lead: this end is just under No. 2 winze, in bottom of the 20, where the lode is not quite so good as last reported, still producing good work for lead ore; we have about 8 feet of ground more to effect a communication from this winze to the 30, which we expect will be accomplished this week. In the same level driving south from cross-cut, on new lode, the lode is 3 ft. wide, with a branch of lead about 5 in. wide, worth 15 cwts. of lead ore per fm., a very promising-looking lode. After a few fathoms further driving in this direction, and should the lode prove as well as the ground driven through, we shall commence a cross-cut east in the 20, just over the ore ground in the 30. The ground in the cross-cut driving east of the 30 is a little more favourable for progress. In the 30, driving south of engine-shaft, the old lode is 1 ft. wide, composed of carbonate of lime, with spots of lead ore; at this point the lode seems to be getting into a better and more settled state as we get off from the influence of the cross joints, &c., which disturbed and almost destroyed the lode about 8 or 10 fms. behind the present end; the ground in the cross-cut driving south from the Dingle is much the same as for some time past, the same may be said of the tribute department.

CEFN CILCEN.—J. P. Thomas, June 13: I have to-day been underground here. I find by a short cross-cut or stope on the north side of the lode a fine course of ore is laid open, full 8 in. wide, solid ore, which will produce, in my estimation, 3 tons of ore per fathom. I am now speaking of the 60, west of footway shaft, and, from the direction it is taking, I consider it to be a separate lode, diverging from the level driving eastwards. A similar cross-cut has been commenced east of shaft, and the ore is coming in at that point. Should my opinion be proved by cross-cuts east to be correct, a rich mine will at once be laid open, shafts and levels being already sunk and driven to the 73. This discovery, being from 200 to 300 fathoms from the boundary, is a very important one. In addition to the above, the lode driven upon by the former parties in this level, east of shaft, is now found to be productive, and for the last 3 fathoms, and in the present end, is worth full 1 ton of lead ore per fm. In the 73, in consequence of two beds of shale being cut through between that and the 63, the lode is not so productive in the back of the level, but in the bottom good stones of ore have been found, and within a few feet from the end good lead has been seen in the back, which convinces me that you are commencing and on the top of another deposit of ore. I am further corroborated by the leader or branch of ore ground coming in as a wedge, opening downwards. I had no time to go to the eastern shaft, whence the large stones of ore have been procured, but from what I have seen I consider we shall lay open a large extent of ore ground from the 70 to the 40, upwards and below—time and development only will prove. I cannot close this report without bearing my testimony to the exertions and good management of the captain, never having seen a mine with such small roadways, shafts, and levels so well ventilated, and with so moderate an outlay.

CORNUBIA TIN.—W. H. Gray, June 12: The western shaft is down 6 fms. out of 11 fms.; set three weeks since; the ground continuing as hitherto, most favourable for rapid progress, and congenial for yield of tin. Considering the difficulties always experienced in getting down through abandoned and comparatively first ground shafts, we are making good headway eastward. The drainage here, however, extends over a large area, and the pitwork brought from Trevisa is none too large for our present purpose; it was rather necessitated, driving the engine fast, but now, after three weeks working, the water begins to fall in. The shaft is down 15 fms. from surface, and from this point (as for 2 or 3 fms. above) we shall no doubt have to renew to the 14. The 14, it must be remembered, dates from the old adit, 4 to 5 fms. below surface; hence 18 or 19 fathoms must be calculated for this level from our present place of discharge. A new horse-whim has been erected over this shaft in lieu of the tackle so far employed, but now useless, by too great depth for manual effort. This will enable us to secure to the 40 right away, by which the water-power will be ready for clearing the horizontal workings at and above this level, with much increased advantage and economy, by having the ground thoroughly drained previous to setting about it, the clearing of the shaft to the 60 being, of course, proceeded with at the same moment. The levels are bringing home for the winding-wheel, and all other matters go forward with the utmost dispatch, taking the strength employed into account, and knowing, as we all do, the adage that "time is money" nowhere applies more truthfully than in connection with mining operations.

CRANE.—H. Skewis, June 12: The cross-cut south, to cut the caunter lode, is set to four men, at 4*l*. per fathom; ground more favourable for driving than for some time past. On the Crane lode a winze is being sunk below the adit by two men, at 3*l*. 10*s*. per fathom, where we hope to lay open tribute ground. We shall clear out the 20 west

this week. We hope to drop the lift to the 36 to-morrow, where we intend to fix the plunger-lift. We have set two pitches on tribute in back of the 20, at 11s. in 1l.

CROOKHAVEN.—H. Thomas, June 10: The plat at the 50 is completed; we shall now resume sinking the engine-shaft under that level. Last week in opening ground for the plat we met with a caunter branch about 6 in. wide, bearing north-east and south-west, composed of quartz, carbonate of lime, and spots of rich yellow copper ore: no appearance of this caunter had been seen above this level, hence the ground in depth is getting much more dislocated and intersected with branches, all of which are mineralised, which powerfully convinces me that depth is only required for a permanent and well-paying mine. The trial making on the south lode, in the 40, is very satisfactory; during the past week several kibbles of orey stuff have been broken; the lode is getting stronger, and contains more ore then when we commenced it. In the 40 cross-cut north there is no material change in the end to notice since last week. To-day I have, according to your instructions, employed a pare of men to commence the western trial shaft, and in a day or two I intend to let it by contract. I look forward to good results in this part of the mine. The spot I have selected for the new shaft is at the point where the intersection of the champion lode, the caunters, and the east and west lodes takes place. I have taken the bearing of the lodes, as also that of the country; a sketch of which I will send you to-morrow, which will in some measure show you the position of the ground.

CUDDRA.—J. Webb, June 13: We have commenced driving on the copper lode in the 100. we shall not take down the lode for a few feet; it is necessary to allow the lode to drain, in order to save the black ore as dry as possible. The tin lode in the 60, west of engine-shaft, is 6 feet wide, of an improving and promising character, and from assays made worth about 1½ cwt. tin per 100 sacks. The stopes in the 46 will be idle for a few days. We have been obliged to send the water from Walker's back through that level, which will be turned off again when we drain the 60. The pumping on Walker's shaft will be set to work to-day; we shall have 4 fathoms of shaft to clear to reach the 60. We shall then have a great extent of lode opened out for us. The lode in the 30, west of Walker's, where we are taking it down, is 5 feet wide; we calculate it to be worth 1 cwt. tin per 100 sacks. We find the lode becoming of a more settled tin character as we extend westward. The 20, driving west, is still going on under the lode; we propose cutting into the lode shortly. We have not found the north lode in the 12 as yet; it appears to be underlying faster than it did about the adit, but we shall soon find it in the direction we are now going. During the past week we have had to alter the serving pass of the stamps, which are now working well, and will be kept on with full force. We sampled on Monday last about 40 tons of copper ore.

DEEP LEVEL.—T. P. Thomas, June 13: I hope this evening to have our water-wheel at work draining the shaft at the gravel bed. We got the water out by a hand-pump for a short time, and commenced clearing; I am glad to tell you we found very nice lumps of solid lead, and I hope shortly to be able to tell you of an important discovery at this part of the mine. In the cross-cut, driving south from the waterfall, we have intersected a lode containing nice strings of ore and a mixture of ore throughout the lode, producing about ½ ton of ore per fathom. We shall continue to drive south a little further before we commence driving east and west, when we shall be able to ascertain its correct value. Lankshear's level has been driven through branches making ore, and we hope soon to meet with one of our east and west lodes. Lloyd's flat and Thomas's level are suspended, and will not be resumed until we can communicate them with the shaft at the gravel bed. From the present appearance of the different points in this mine, and the great depth, or backs, above our levels, together with our water power, and the great advantages for working this mine at a trifling cost, I consider this one of the best speculations in Wales.

DEVON AND CORNWALL UNITED.—T. Neill, June 11: In the 10, east of William and Mary engine-shaft, the lode is somewhat improved since the report for the meeting, and the other parts of the mine present no alteration to notice.

DEVON UNION.—J. Donnal, June 13: The lode in the 28 east is 2 ft. wide, composed of mundic, peach, friable spar, and prian. The lode in the engine-shaft is still large, and of a promising appearance, producing occasional stones of yellow copper ore of rich quality. All the machinery both underground and at surface is working very well.

DRAKE WALLS.—Thos. Gregory, June 13: The branches in the 102, east of Matthew's shaft, are disordered with some floors of capel, quartz, &c. In the 92 east the branches are producing saving work for tin. The branches in the 80, west of Betteley's shaft, are improving, and will now produce some good work. The branches in the 60 and 50, west of Brenton's shaft, are producing good saving work, and very promising. We have no change to notice in any other part of the mine.

EAST CARN BREA.—T. Glanville, June 12: No lode has been taken down in the shaft since report of last week. In the rise in back of the 50 the lode is 2 ft. wide, yielding 1 ton of ore per fm. In the 50 west the lode is 18 in. wide, yielding stones of ore. In the 40 west the lode is yielding 4 tons of ore per fm. The other parts of the mine are without alteration.

EAST CRINNIS AND SOUTH PAR.—F. Puckey, C. Merrett, June 10: In the 125, east of Smith's shaft, the lode is a little improved, which is now 3 ft. wide, producing good stones of ore, and still letting out a large stream of water. The lode in the winze sinking below the 112 is 4 ft. wide, and will yield 2½ tons of ore per fm. The lode in the stopes in back of the 112 is 6 ft. wide, and will still yield 4½ tons of ore per fathom. The other parts of the mine are much the same as last reported.

EAST DEVON GREAT CONSOLS.—T. Richards, June 11: The ground in the engine-shaft continues favourable for sinking. In the 40 west I think we are getting near a cross-course, as the lode contains much more water than I have seen before. The ground continues favourable for driving, and very congenial for copper ore. In the 40 east the part of the lode driving on is composed of mundic, spar, peach, and copper ore; and as I anticipate there is more lode standing to the south, I have placed men to cross-cut in that direction to prove it.

— T. Neill, June 13: The shaft is not sinking on the lode, but in the killas by the side. This killas contains several branches of spar, peach, &c., all of which, with the rock as well, are highly stained with the green oxide of copper. These indications I presume are, as it were, proceeding from the north lode, which we are getting nearer to every fathom we sink.

EAST GUNNIS LAKE AND SOUTH BEDFORD.—J. Phillips, June 13: The lode in the 36 east is improved, now worth 4 tons of ore per fm., and still promises improvement. The stopes in the bottom of the 36 are worth 4 tons of ore per fm. No alteration in the 36 cross-cut south. The lode in the 24 east is 3 ft. wide, producing good stones of ore, a very promising lode. The lode in the deep adit east is 3 ft. wide, and worth 1 ton of ore per fm. The men in Gard's shaft are employed in cutting plat at the adit level. We have commenced driving north, and hope to reach the lode by the middle of next week.

EAST ROSEWARNE.—J. James, June 8: No change to notice in the 55 cross-cut. In the 43 east the lode is split into several branches, each producing a little ore. They seem to be approaching each other; we think they will shortly unite, and form a productive lode. In the 43 west the lode is about 9 in. wide, impregnated with copper, but not rich. The north branch, referred to in former reports, is 6 in. wide, producing 1 ton of ore per fm.; this is within 18 in. of the lode, and we expect in a few days to report favourably on the intersection; the stopes over this level are improved, now worth 10l. to 12l. per fm. In the 33 east the lode is 6 in. wide, yielding stones of ore.

EAST TOLGUS.—June 12: Redruth Consols Lode: The lode in John's shaft, sinking below the 57, is 2½ feet wide, yielding 2 tons of good ore per fathom for length of the shaft (12 feet); it is a beautiful lode. In the 57 the lode is 20 inches big, composed of spar, jack, and mundic. The lode in the 34 east is composed of spar, mundic, and good spots of ore; looking more promising than for some time past. The stope in back of the 34 west is worth for tin and copper 10l. per fathom. The stope in bottom of the 34 west is worth for tin 10l. per fathom; and the stope in back of the 22 east is worth for tin 6l. per fm. The ground in the 46 cross-cut is moderately easy.

EAST TYWARNHAILE.—J. Morcom, S. Thomas, J. Tonkin, June 12: We, as requested, have carefully examined this mine, and beg to hand you our report:—This sett immediately adjoins the eastern boundary of the celebrated Great Tywarnhaile Copper Mines, in the parish of St. Agnes, Cornwall; it is situated south of, and parallel to, Great Wheal Towan and Great Wheal Charlotte, from both of which mines enormous profits have been realised; and north of North Treskerby, North Downs, Brigan, New Hallenbeagle, and several other productive mines. The length and width of this sett on the lodes exceeds half a mile, and we consider that a small outlay will very soon bring this mine into a paying position, the water being drained to the 28, which is the bottom of the mine, by the Great Tywarnhaile engine. The 10 is driven east from the main shaft about 30 fms., the lode is large, composed of ore, jack, and mundic. The 20 is driven east of the said shaft about 50 fms., principally on the north part of the lode, and cut into some places about 7 feet, but do not appear to have reached the south wall; the lode is hard, composed of ore, jack, and mundic; the same may be said of the 20 west, which is driven about 10 fathoms from shaft. About 20 fms. east of shaft a winze is sunk below the 20 about 8 fms., and a level driven east of this winze about 10 fms.; lode 6 feet wide, of the same character as in the levels above. A great deal of the ground in the backs of each of these levels has been taken away by the former workers on tribute for copper ore. We have taken and assayed samples which produced a very high percentage for copper. We recommend that the bottom levels be driven with all possible speed, as we have a high opinion that a mine of considerable magnitude will be opened up, the locality being one of the best in Cornwall.

EAST WHEAL FALMOUTH.—W. Hancock, June 11: We have sunk the new engine-shaft about 5 ft. below the adit level, but we have not as yet taken down the lode, which is standing to the north of the said shaft; we intend sinking 4 or 5 feet deeper before taking it down, when you shall be advised of its size and character. We find the water very much increasing as we go down, and I fear we shall not be in a position to go very deep without a lift, which will be proved when we take down the lode; the lode is carrying a pretty wall on the south side, and I hope will turn out to be a good one.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, June 8: The lode in the 35, east of the shaft, is from 4 to 5 ft. wide, mixed up with elvan and granite, producing stones of ore and a little tin. The lode in the 35 west is full 3 ft. wide, composed of gossan, quartz, and prian; it has very materially improved since yesterday; it is now worth full 2 tons of ore per fm., besides tin to the value of 5l. or 6l. per fm., and presenting a very promising appearance indeed. The lode in the 25 east is about 1 ft. wide, embedded in a softish elvan, and letting out a quantity of water; we have been, and are still, expecting a larger lode here. In the 25 west the lode is 3 ft. wide, a mass of gossan and prian, yielding occasionally fine stones of grey ore, embedded in gossan, with tin to the value of about 5l. per fm.; altogether, we are of the opinion that this level has presented from the shaft as fine appearance for making copper below as any miner can wish to see, and if we may judge from analogy, we are likely to find a deposit below, and the appearances of the 35 west also strengthen that opinion very much. The air-shaft is sunk about 11 fms., in which the lode is presenting everything almost that one would desire for the depth; this is about 15 fms. beyond the 25 and 40 fms. from the shaft.

EAST WHEAL RUSSELL.—J. Richards, June 7: Homersham's shaft is in regular course of sinking to the south of the lode, in ground favourable for progress.—Homersham's Shaft: In the 110 cross-cut north the south wall of the north lode is intersected and cut into about 9 in.; it is composed of peach, mundic, quartz, and gossan, similar to that in the upper levels before reaching the body of the lode; the water is also increasing fast, which is a very good indication. In the 100 east, and east of Dawe's cross-cut, on the north part of the lode, the lode is large, 4 ft. wide, consisting of mundic, capel, and a small proportion of copper ore. In the 100 east, west of Dawe's cross-cut, on the north part of the lode, the lode is 5 ft. wide, and worth 2 tons of ore per fm. The lode in the stope in back of the 100, west of Oats's No. 1 winze, is worth 8l. per fm. The lode in the stope in back of the 100, east of Oats's No. 1 winze, is worth 15l. per fathom. The lode in back of the 100, west of Oats's No. 2 winze, is worth 12l. per fm. In the rise in back of the 100 east, on the south part of the lode, the lode is worth 15l. per fm. The lode in the stope in back of the 88, east and west of Benny's winze, is worth 12l. per fm. In the stope in bottom of the 88, on the north part of the lode, the lode is worth 2½ tons of ore, or 20l. per fathom. The lode in the 88 east is 2 ft. wide, composed of mundic, capel, and quartz. The part of the lode (4 ft. wide) being carrried in the 88, west of Hitchins's shaft, is composed of capel, gossan, quartz, and good stones of ore.

— J. Goldsworthy, June 12: Homersham's shaft is in a regular course of sinking below the 110; ground favourable for progress. In the 110 east, in the cross-cut north, the capel part of the lode has been cut into 3 fms. 4 ft.; the capel contains spots of yellow copper ore, and letting out a quantity of water. We do not expect to be able to report anything further on the lode for several days, as we expect there is several feet more to cut through the capel part of the lode before reaching the productive part. There is no change in any other bargain to notice since last reported on.

EXMOUTH.—J. P. Nichols, J. Nicholls, June 12: Bishop's stope, in back of the 72 north, is at present yielding full ½ ton of lead ore per fm. Brooks's stope, in back of the same level, is not so good as formerly, now worth 3 cwts. of lead per fm. The lode in the 60 north is large, easy for development, and is composed chiefly of quartz, and presents kindlier appearances for an improvement than it has for the last 60 fms. driving. The 50 north is also very easy for driving, and is of nearly the same character as the lode in the 60 north; these ends require no timber, hence we are making great progress. The 20 south is harder, and the lode not so productive for blende, but we consider this change temporary. The 10 south is without alteration to notice since last reported on. The pitches are yielding about the same quantity of lead as for some time past.

FOWEY AND PAR.—J. Tredinnick, June 11: During the past month we have completed the engine-shaft from the surface to the adit, and it is now set at 12l. per fm. for 6 fathoms. They are down 10 fathoms below the adit. The stratum is a beautiful soft granite, and the ground has lately improved for sinking. We shall cut Colman's lode at about 20 fathoms below adit, in the bottom of which it was 6 feet wide, producing good work for tin, and possessing every characteristic of making a good and productive lode in depth. Underlie north about 4 ft. in a fathom. Palmer's lode, which is about 9 feet north of the shaft in the adit, underlies about 2 ft. in a fathom; this lode produced very rich work for tin, and will form a junction with Colman's lode in depth. The engine-shaft is well situated to take the different lodes in depth which pass through the valley, all of which are of a most promising appearance. The masons are getting on with the engine-house as fast as possible, the blacksmiths' shop is finished, and the other necessary mine buildings will be at once proceeded with.

FRANK MILLS.—J. P. Nicholls, J. Cornish, June 12: We have cut the east and west walls of the lode in the 84 cross-cut; the lode here is 18 feet wide, consisting of white iron, quartz, and lead ore, and will yield of the latter about ½ ton per fm. The 84 north is again being driven, and it will yield full ½ ton of lead ore per fathom. We have commenced a stope in the back of this level, and it will yield for the width we are carrying (6 ft.) 1 ton of lead ore per fm. The 72 north is without any change since last reported; it is still yielding a small quantity of saving work. We have suspended the 60 north for a few days, and put the men to cross-cut west, to ascertain whether we have any more lode near us in that direction. We have again met with the east lode in the 60 north, but have not yet opened on it sufficient to state its size or value. The stope in the back of the 72 is without any change to notice. The three stopes in the back of the 60 are looking quite as well as they have for some time past. We are still progressing slowly with our stope in the back of the 45, in consequence of the lode being still so soft; it continues, however, very good for ore. On the whole, we are making better progress than we were when last reported.

FURSDON.—J. Hampton, J. P. Daw, June 11: We have set the following places:—The 21 to drive west, by six men, the month, at 10l. per fm; the end is hard, but is looking more promising. The cross-cut in the 11 east, by four men (two taken from the winze), at 3l. 15s. per fm.; this is the best cross-cut ever driven in the mine, having gone through more ore. The 11 west, to four men, at 10l. per fm.; this end is still improving, and worth quite 3 tons per fm. The winze in bottom of the 11 west, to two men, at 8l. per fm.; we shall commence a winze further west than we first intended to sink, as that place is poor, and it will be a greater advantage to us in stoping away the ground after it is developed. The winze in the bottom of the adit, by two men and one boy, at 3l. 5s. per fm.—lode orey. In conclusion, the mine is looking still more promising, and the prospects are such as to warrant the most sanguine expectations.

FURZE HILL WOOD CONSOLS.—T. Gregory, J. Hoskin, T. Parsons, June 12: Phillips's engine-shaft is sunk to the depth of 21 fms., and a cross-cut south of 6 ft. has taken the lode below the extraordinary old workings, and at the point of intersection the lode is upwards of 3 feet wide, 2 feet of which is very good work for tin, worth full 25l. per fm.; the killas by the side of the lode is of a favourable character, and strongly mineralised. The engine-shaft can be sunk for 10l. per fm. for the deeper levels, and four other lodes will be intersected below the old workings by a short cross-cut. North and south from the engine-shaft there is every probability of those lodes being equally productive, from the fact of all the lodes being taken away by the ancients from surface to the adit, which fully bears out the high opinions expressed by Capts. Charles Thomas, William Pascoe, and others, on this property.

— J. S. Phillips, June 14: A good discovery has been made here by a cross-cut from Phillips's engine-shaft, 12 fms. under the old workings, and which is worth upwards of 25l. per fm. for tin; this augurs well for the success of this undertaking, as there are four other lodes equally worked on above the adit level by ancient miners yet to be cut, and as the engine-shaft can be sunk for 10l. per fm., and the ends proportionably less, it will yield a good profit, and realise all that has been expected of this fine old mine.

GAWTON.—G. Rowe, June 10: I beg to hand you my report for the general meeting, showing the amount of work accomplished during the past four months, with present and future prospects of the mine. The 50 west has been driven 2 fms. 1 ft. 6 in., making a total distance from engine-shaft of 131 fms. 2 ft. 6 in.; about 9 ft. behind the present end a small cross-course (or caunter) running in a south-east and north-west direction intersected the lode, and at the point of junction rather disordered it, but the present appearances are, I am glad to inform you, of a very encouraging nature. The lode has opened out about 4 ft. wide; on the north side it is composed of flookan, mixed with friable spar and mundic, and the south carries a leader of ore and mundic 12 in. wide, mixed with beautiful spar—in fact, I have not seen the lode at this level on any former occasion presenting so kindly an appearance, although not at present of much value. The 36 west has been extended 12 fms. 1 ft., making a total distance from engine-shaft of 133 fms. 2 ft.; at this level also a small cross-course has intersected the lode nearly at right angles, a few feet behind the present end, where it becomes of less value than in the last 5 fms. driving east of cross-course, where the lode was found productive, varying in value from ½ to 3 tons of ore per fm. It is, however, again improving, forming a leader part 9 in. wide to the south of the hard capel, precisely in character like that at Okel Tor. I consider this point also looking cheering, judging from the improved character of the lode in the last few fathoms driven, bearing in mind that we are just now approaching the lable lands, where I am inclined to expect good results. The stopes throughout the mine are not looking quite so well. At surface a new tram-road has been laid down, and completed for upwards of 80 fms. in length; also collar of shaft and poppit-heads raised, which are now in good working condition. For the further prosecution of the mine during the coming four months I would recommend that our operations be chiefly confined to driving the 50 and 36 fm. levels with as many men as the nature of the work will admit of; also communicate those levels with a rise or winze, for better ventilation and proving the lode. We calculate our next sampling to be about 30 tons of copper ore and 20 tons of mundic, worth about 103l. The monthly expenditure in labour cost, in order to carry out the proposed work, will be about 100l.

GONAMENA.—R. Pascoe, W. George, jun., June 12: We have taken the men from the 90 end east, on Sarah's lode, to rise against a winze we have sinking below the 80, for the twofold purpose of ventilating the end and opening out a good piece of tribute ground, where the lode is worth 10l. per fm. for copper. In the 90 west the ground is still favourable for driving, but no alteration in the lode to notice; the stope in the back of this level is worth 10l. per fm. for copper and tin. The lode mentioned in our last report as being 25 fathoms south of Sarah's, in this level, has further improved, it is now 18 in. wide, producing good saving work for copper. In the 80 the lode is 1 foot wide, composed of peach, spar, and some spots of copper ore: here we would remark the lode is becoming more regular, and the ground more favourable for driving. The lode in the 70 is just as last reported. The stope in the back of this level, east of the winze, is now set on tribute, at 3s. 6d. in 1l. for copper; and the stope below the 58, west of the winze, is set at 7s. in 1l. We have sampled this week, computed, 101 tons of copper ore.

GREAT CRINNIS.—J. Webb, June 12: We have not made great progress this week in sinking the engine-shaft below the 110, having had a little let or two in pumpwork. In driving the 100 east we have met with an elvan course, which is not unlikely to cause some change in the lode; after driving a few feet past this elvan, we propose cross-cutting to ascertain if there is any part of the lode to the north or south of our present driving. The 100 end, driving west, has a leading part of the lode 1 ft. wide, producing ore: to the south of this there is 6 or 7 ft. of lode, and a hard capel. The 90 cross-cut north is without much change.

GREAT ONSLOW CONSOLS.—G. Rickard, June 10: The lode in the 107 east continues in character and value pretty much the same as for some time past; it is worth for mundic and ore about 9l. per fm. In the 122 west the lode is getting more settled; it contains spots of mineral, but none to value yet. In the 122 east there is an improvement in the lode; recently it has been disordered and very small, but during the past week has increased in size up to 3 ft. wide, and is spotted throughout with strong yellow ore. I am disposed to think that this end is now home to the east end of the run of large lode seen in the level above.

GREAT RETALLACK.—W. H. Reynolds, June 9: The shaftmen have this week been preparing for fixing a plunger at the 35, in Stephen's, and bringing down rods from the 20 through the diagonal for sinking with a lift below the 35; we shall complete this in three or four days I hope, and while the consumption of coals will be greatly reduced, we shall be able to make good speed with the sinking; I calculate on at least from 4 to 5 fms. per month, and at this rate we can speedily lay open a 45 fm. level. In the 35, east and west, the lode is yielding large quantities of blende, and the spar contains good crystals of lead, and the lode nowhere looked so kindly for making lead in depth. We intend sampling 500 tons of blende on Wednesday next.

GREAT SOUTH TOLGUS.—J. Daw, June 12: Little has been done in the bottom levels in the past week, the men having been employed in assisting the sumpmen to fix a new plunger-lift. In the rise in the back of the 50, west of Lyle's shaft, the lode is 1½ ft. wide, producing a ton of copper ore per fathom. In the rise in back of the 40 west the lode is 2½ ft. wide, producing 3 tons of ore per fm. In the western rise, in the back of the 40, the lode is 3 ft. wide, producing 1 ton of ore per fathom.

GREAT TREGUNE CONSOLS.—S. Bennett, June 12: This morning I find the lode in the bottom end west very much the same as when I saw it last, in reference to the ore it contains, but it is improved in its general appearance—containing much ore and better looking spar, and somewhat less of the oxide of iron. I think as it gets off the influence of that branch from the south-east, which fell into it a few feet behind the end, an improvement will again take place.

GREAT TYWARNHAILE.—J. Edwards, June 13: The 70 is now dry, and looking better than either level yet seen in the mine since we commenced working.

GREAT WHEAL ALFRED.—W. Bugelhole, J. Delbridge, June 12: Copper House Shaft: We have cut the south wall of the lode in the 230 cross-cut south, and are satisfied there is no part of the lode south of the cross-cut. The shaftmen have commenced driving the 230, east of shaft. The lode in the 220 west is 6 ft. wide, composed of fluor-spar, killas, mundic, tin, and yellow copper ore, worth 16l. per fm. The lode in Kemp's stope, in back of this level, west of winze, is worth 30l. per fm. The lode in the winze sinking below this level, east of shaft, is worth 14l. per fm. The lode in the stope in back of this level is worth 18l. per fm. The south part of the lode in the 210 west is 4 ft. wide, worth 13l. per fm. The north part, where we are now stripping down, is worth 21l. per fm. The lode in No. 1 stope, in the bottom of this level, is worth 44l. per fm.; No. 2 stope is worth 16l. per fm.; No. 3 stope is worth 50l. per fm.; No. 4 stope is worth 70l. per fm.; No. 5 stope, in back of this level, is worth 25l. per fm.; No. 6 stope is worth 27l. per fm.; No. 7 stope is worth 24l. per fm.; No. 8 stope is worth 25l. per fm.; No. 9 stope is worth 15l. per fm.; No. 10 stope is worth 48l. per fm.; No. 11 stope is worth 30l. per fm. The rise in the back of the 200, east of shaft, is communicated to the 190. There is no change in the 160 cross-cut during the past week.—South Lode: The lode in No. 1 stope, in bottom of the 137, west of Copper House shaft, is worth 16l. per fm.; No. 2 stope is worth 11l. per fm. All the machinery and pitwork in the mine are working very well.

GREAT WHEAL FORTUNE.—J. Daniel, R. Pryor, J. Hosken, June 12: Old Mine: In the 85, west of Harvey's engine-shaft, the lode is 4 feet wide, worth 8l. per fm.—North Lode: In the 60, west of cross-cut, the lode is 1 foot 6 in. wide, worth 10l. per fm.—Trebelcock's Shaft: The men have completed cutting the plat in the 50, and have resumed sinking.—Carnmeal: In the 68, east of Painter's engine-shaft, the lode is 3 ft. wide, worth 10l. per fathom; in the same level, west of shaft, the lode is 3 feet wide, worth 7l. per fathom. In Hosken's flat-rod shaft, below the 58, the lode is 5 ft. wide, saving work. In the 58, west of said shaft, the lode is 3½ feet wide, worth 24l. per fathom. In No. 1 stope, in back of this level, west of shaft, the lode is 5 feet wide, worth 35l. per fathom. In No. 2 stope, in back of this level, the lode is 7 feet wide, worth 90l. per fathom. In the 48, east of Hosken's, the lode is 4 feet wide, yielding a little tin. The eastern-whim-shaft, below the 18, is holed to the 36, where the men are now employed in cutting plat, which with casing down the shaft will be completed about the end of the month to resume sinking below the said level in a good course of tin. In the stopes in back of the 36, west of eastern shaft, the lode is 3 ft. wide, worth 25l. per fm. No change to notice in other parts of the mine.

GREAT WHEAL MARTHA.—H. Rickard, June 12: We commenced sending down the plunger bottom last night, and no time will be lost in fixing the same, as far as the nature of the work will admit. There is no material alteration in either of our tutwork bargains. The rise in the back of the 40, east from engine-shaft, is producing most excellent work for copper ore. We have not yet made a communication against the winze sinking below the 30, but can hear each other speak. This piece of work will soon be accomplished. The tribute department is yielding well. The masons are getting on well with the walls of the engine-house, and I hope next week to bring home the crusher, so that not a moment shall be lost in bringing this long-desired object to a close. We are carting and crushing the ores at Trehill as fast as we can; and if I could get carriers to take it to the quay I could sample 300 tons; but, as other samplings for the different mines will intervene, I fear I shall not be able to do so.

GURLYN.—J. Curtis, J. Rees, June 12: Saturday last being our monthly sitting the following tutwork bargains and pitches were taken:—Bawden's Lode: The engine-shaft to complete to the 60 by nine men, at 16l. per fathom; a fortnight's work. The lode in the present bottom of the shaft is 3 feet wide, containing rich copper ore and tin, and when we have opened a few fathoms at the 60 the backs will set on tribute at 10s. in 1l., at the rate of 60l. per ton for tin, at which standard all our tributers are paid. The 50 to drive east by two men and two boys, at 40s. per fathom; this end has improved since last reported on, and will now pay for driving. The 50 to drive west by three men and three boys; opening tribute ground. To rise above the back of the 50 by four men, at 35s. per fathom; this rise will be holed to the 40 within a fortnight, and will cut out ground that will set at 7s. in 1l., and will ventilate this part of the mine. To complete Bawden's shaft to the 40 by six men, at 40s. per fathom; this shaft will be holed to the 40 within the week, and will then become a drawing shaft for all the stuff west of the engine-shaft.—Riche's Lode: The 40 to drive west by six men, at 90s. per fathom; the lode since last reported on has been worth 20l. per fm., and the back is set at 4s. 6d. in 1l. We have 26 tributers working, from 4s. 6d. to 13s. 4d. in 1l., who are breaking double the quantity of tinstuff that we can return with our present little stamps. Had we adequate stamping power we could now give employ to 60 or 70 men on tribute, and return 10 tons of tin per month, without increasing our tutwork cost or merchants' bills, except for the running working materials.

GWYDYR PARK.—W. Smyth: We took down the lode in the deep adit yesterday, which turned out poor for the first 4 ft., but the remaining part into the end turned out as fine stones of ore as ever I saw in the end; there is no change in the lode, it is now perpendicular about 1 ft. below the back of the end to the bottom; I cannot say its value at present, as we have not broken more than 1½ ft. from where the improvement took place. We are saving all the orey part of the lode for dressing; I cannot say what the cost will be, I should think it will be about 35s. per ton.

HAWKMOOR.—J. Richards, J. T. Phillips, June 11: Owing to the dry weather the surface water is not sufficient to enable the wheel to keep the mine in fork, consequently there is nothing doing at the 80 or 70 fm. levels. In the stopes in back of the 50 east the lode is worth 1½ ton of copper ore per fm. The lode in the 50 west is 2 ft. wide, but has not been taken down this week. The lode in the stopes in bottom of the 40 east is worth 2 tons of ore per fm. In the 25, east of Rowe's rise, the lode is a good course of ore, worth 3 tons per fm. The stopes in back of the 30, east of Rowe's rise, are worth 2 tons of ore per fm.—West Hawkmoor: In the adit level west, on No. 2 lode, the lode continues to produce occasional stones of copper ore.

HUCKWORTHY BRIDGE.—J. H. Rodda, June 12: The lode in the engine-shaft sinking below the 25 is much the same as last reported. No change to notice in the 25 end east. No lode yet discovered in the cross-cut south in the 15.

LADY BERTHA.—Capts. Harpur and Metherell, June 10: Nothing of importance has taken place in any part of the mine since our last communication; we have, therefore, no change to inform you of in either of the ends, pitches, or stopes throughout the mine. From the appearance of the 30 east we hope for an improvement again shortly.

LADY ELIZA.—J. Evans, June 13: I have placed two miners in No. 2 level, as requested; there are evident signs that we are fast approaching the lode. The end of the deep adit continues much the same as last reported; water quicker than hitherto; we save nearly all of the contents of the lode, which is 3 feet 3 inches wide, with strong indications of improvement.

LONG RAKE.—F. Evans, June 11: I have been underground here to-day. The engine works steadily, and is lifting a large quantity of water; it is presumed that the water will be down to the bottom level by to-morrow, and I think it likely it will be the case; this level appears to be the only one driven from the engine-shaft, and I hope by to-morrow's post to be able to get into it, and furnish some particulars respecting the same; for the present our attention is confined to forking the water, and repairing the shaft as we go down. I think it more than likely we have been draining a large pool eastward from old workings.

MAUDLIN.—J. Tregay, June 8: West Mine—Adit End: We have gone through a branch here during this week about 1 ft. wide; we believe the main part of the lode is further south, as the water is flowing freely from the end.—South Mine: Nothing yet intersected in the cross-cut.

MOLLAND.—T. Bennetts, June 12: The lode in the 32 east is 1½ ft. wide towards the bottom of the end, producing good stones of ore, and rising towards the back as we proceed east. We frequently find in the country small branches or veins of ore, which are undoubtedly feeders of the lode. In the 20 east we have met with a large slide, which has disordered the lode. Now, as this slide is running nearly parallel with the lode, we shall have to drive several fathoms before we get out of its influence; nevertheless, being so large it may renovate the lode and country ultimately. The stopes in bottom of this level are producing 1½ ton of ore per fm.

NANTEOS AND PENRHIW.—H. Boundy, Wm. Paull, June 8: Eystumtean: The lode in the 10, below the deep adit, is much the same as last reported, from 8 to 10 feet wide, and letting out a quantity of water, and very stiff for driving, yielding probably from 20 to 30 cwts. of ore per fm.; but we may here remark that the lode, as far as seen, does not contain half as much mundic as in the levels above. The stope in back of this level, east of No. 3 rise, is yielding 12 cwts. of ore per fm. The stope in ditto, west of rise, is yielding 8 cwts. of ore per fm. The rise in the level west of No. 2 rise is yielding 6 cwts. of ore per fm.; this rise we expect to communicate with the winze sinking below Reese's level in the course of a week or ten days; we shall then strip down the lode standing on the side of the level, and commence a stope from the winze. The lode in the end, east of cross-cut, in Reese's level, is yielding 6 cwts. of ore per fm. In Row's level west the lode is yielding good stones of ore, and letting out more water than it has for some time past, which is a good sign of some change being near. The stopes in back of this level are yielding on an average from 8 to 10 cwts. of ore per fm. —Bwlchgwyn: In the 30 east the end is letting out a great deal of water; the lode is 3 ft. wide, yielding about 6 cwts. of ore per fm., presenting a very promising appearance, and we are daily expecting an improvement. Tribute without any change worthy of remark. We have to complain of a scarcity of water, which greatly delays our drawing and dressing.

NANT-Y-IAGO.—J. P. Roach, June 8: The rise in the 10, east of engine-shaft, is 4 ft. above the level; the lode is not so productive as when commenced upon, but as it appears to be subject to bunches of lead, I have no doubt it will resume its former productiveness in a day or two. In the 10 west the rise is up 4 fms. above the level; ground pretty good for exploring, but at this point the lode is not so good as it has been. In a day or two I intend to put the men to cross-cut a few feet north to ascertain if there is any more lode standing in that direction; I expect there is. The lode in adit level, east of cross-course, is 2 ft. wide, composed of clay-slate, spar, and spots of lead ore, and is more congenial for ore than it has hitherto been. We have 4 tons of lead fit for market, and 20 tons of blende. When the both rises are holed we anticipate having a great deal more to dress.

NEW CROW HILL.—The lode in the 35 is far exceeding our expectations, and is an important improvement in the mine; we have opened the lode for about 4 fathoms in length for about 10 feet through, and have not yet seen the south wall of the lode; we have set the same to four men, as last month, to open for the same length further south, at 50s. per cubic fathom; the lode throughout is mundic, lead, and a little spar, very good work for stamps, after selecting some of the best lead. Both ends are looking well, and should the lode continue its present size and quality, of which at present we see no sign of alteration, we shall require large stamping power, and have sufficient to employ them for some considerable time, without any further discovery. Our pumping-wheel would drive 24 heads, besides drawing all the water; our stamps-wheel would work three more heads for six or eight months in the year, and we can put up a new wheel with six heads, which ought to be done at once, for we have no hesitation in assuring the committee that we have ample work.

NORTH BASSET.—T. Glanville, G. Davey, June 12: In the 142 east the lode is divided; the north part is 2 ft. wide, composed of spar and prian, with good stones of grey ore; the south part is 8 in. wide, producing good stones of ore also. We have communicated the rise in back of the 102, to the winze under the 92, and shall now drive the 102 west towards Grace's shaft with all possible dispatch. In the 92 west the north part of the lode is small; we have, therefore, put the men to drive on the south or main part of the lode, which is 18 in. wide, producing good stones of ore. In the winze under the 72 the lode is 18 in. wide, producing 1½ ton of copper ore per fm. Our sale of tin ores yesterday realised 132l. 1s. 11d.

NORTH DOWNS.—F. Pryor, June 12: I am glad to be in a position to tell you that this mine is opening out well. The 50 east is worth full 40l. per fm. The 50 west is worth full 10l. per fm. The winze sinking below the 50, west of shaft, is worth 30l. per fathom. Our pitches are also looking well, and we are discovering more ore than we are taking away.

NORTH JANE (Chacewater).—S. Sims, C. R. Webb, June 8: At the 20, driving west of engine-shaft, by three men and three boys, at 3l. 15s. per fm., the lode is 1 foot wide, composed of mundic and soft spar, and has a very promising appearance for making silver-lead, and as we have a shoot of ore dipping east towards this level from Bull's shaft, and the ground being softer and more like mineral ground than it has been for some time past, I think this level should be continued driving. The 12, driving east of gossan shaft, by three men and three boys, at 2l. 10s. per fm., is much improved since last reported; the lode is 3 ft. wide, producing tin and mundic, worth 6l. per fm.; there is a good lode of tin gone down in the bottom of this level, worth 12l. per fm., which cannot be worked until gossan shaft is sunk 10 fms. deeper to drain the water; in order to sink this shaft we must have a stronger chain or iron rods. The 12, driving west of gossan shaft, by three men and three boys, at 3l. 15s. per fm., is improving; lode 1 ft. wide, and worth 20s. per fm. for tin; ground softer since last reported. The winze sinking below the adit level, west of gossan shaft, by four men, at 3l. per fm., is worth 4l. per fm. for tin; we are sinking this winze in order to prove the piece of ore ground, and to ventilate the 12. We have five tin pitches working by fourteen men, at from 12s. to 13s. in 1l.; the men getting fair wages. We are altering the flues of the burning-house, and hope to resume burning tin by Wednesday next; we have also put in new grates to the stamps, much finer than the old ones, which we find answer much better. We have commenced dressing the mundic and lead, and hope to get a parcel of each ready for the market shortly. The engine and pitwork are in good condition, and work very well. The tributers working in bottom of the adit level, at Kerr's shaft, 25 fms. from surface, have this day cut into a good lode of tin, worth 12l. per fm.; the lode is 2 ft. wide; this is quite a new discovery.

NORTH MINERA.—T. P. Thomas, June 13: Charles's shaft is down 2 fms.; the part of the lode we are sinking upon will produce 3 tons of ore per fathom, but from the leaders of ore gone and going off to the north, it is impossible to say what the whole may produce. There is no doubt of the lode making as wide as above the 35, which is now 16 feet wide, and ore still going north. I call it lode, but it is strictly a lode and flats, or riders from, and making large deposits of ore between beds of shale on the north side of the lode. On the south side we have a smooth and well-defined wall, carrying a leader of lead nearly perpendicular, but on the north side we have no defined wall. The stopes below the 25 are producing about 3 tons of ore per cubic fathom. The cross-cut in back of the 25, south of footway-shaft, is looking very promising, and producing about 1 ton of ore per fathom. We have commenced sinking the shaft upon the north and south lode, which is looking very promising indeed, and producing about 1 ton of ore per fathom; the ore making in strings or leaders of solid lead, which are increasing in strength as we sink. This lode is well defined, and, with a very slight underlie, will serve as a cross-cut to explore or intersect our east and west lodes, and will, I have no doubt, prove a great auxiliary to our returns at Pugh's. At Jones's shaft we have very nice lead in the north end and on the eastern side, but as yet we have not done sufficient to estimate its value per fathom. The splendid course of ore gone through east of Williamson's winze in the 25 and 35 fm. levels is still untouched, as we cannot at present, from the absence of rain and water, dress one-half of what we are breaking west. We shall get the wheel and plunger for supplying water at all seasons of the year erected as soon as possible, and we are putting it where it will be available for crushing and dressing the ore and for pumping in the western part of our mine.

NORTH WREY.—T. Kemp, June 13: Old Shaft: Since our engine was started on the 1st, we have forked the water to the bottom of the 38, and shall commence the cross-cut from that level to come out under the point of the new shaft, as directed, so that the men may afterwards rise and sink that at the same time. The 38 end will also be pushed on with towards the copper lode.—New Shaft: The casing and dividing was finished on Tuesday, when the sinking was resumed by the full force of men; good

progress is being made, and should the ground continue as favourable as at present, I calculate the men will sink 8 feet per week; if so, this will be good work. The little engine will consume about 3½ tons of coal per week.

NORTH NANT-Y-MWYN.—J. Thomas, June 13: The lode in the end is looking well, being large, and good for lead ore; in fact, the ground is highly mineralised throughout. We are at present preparing our dressing-floors, and we are expecting to commence dressing lead ore very shortly, and hope to have a good parcel for market soon, this will make the mine to speak for itself, and prove all my former reports to be true.

NORTH WHEAL TRELAWNY.—H. Hodge, June 13: Magor's shaft is sunk 9 feet under the 65, and have also cut a trip-plat at this level. There is nothing new to notice in any other part of the mine.

OLD TOLGUS UNITED.—G. Reynolds, June 13: The south lode, in the 52 west, is 18 in. wide, saving work for tin, and seems to be improving. The 52 cross-cut is yielding more water, and from present appearances there must be another part of the lode ahead. The south lode, in the 32 west, is at present divided by a horse of killas; each part is composed of congenial spar, producing good stones of copper ore and mundic; we have this day put a pare of men to sink a winze below this level, in order to ventilate the driving of the same. The repairing in the adit is nearly completed, and the tin dressing is progressing favourably.

PENDEEN CONSOLS.—Wm. Eddy, J. Warren, June 8: We have nothing new to inform you this week. In the 106 south we have a little tin of a kindly character, partaking much of the nature of the Boscaswell Downs tin, which we are driving right against, and which has been one of the best tin lodes ever worked in our district, and there is no doubt but that there is between both the mines a valuable piece of tin ground.

PENHALLS.—R. Pryor, sen., S. Gribble, June 8: The 20, east of engine-shaft, is worth fully 10*l.* per fm., with a promising appearance. The winze sinking below this level is worth 6*l.* per fm. In the 10, driving east of this shaft, we have lately holed to old men's workings, which were worked by them from the adit level to about 2 ft. below the back of this end, this being as deep as the water would allow them to go, as the shaft was but a few feet in advance of these bottoms when the mine was abandoned. We consider the stoping of the ground between these two levels as an indication of something good before us, as well as from the fact of our having, before this communication was made, a lode in this end, worth full 12*l.* per fathom. The lode in the 10 west has improved since our last report, and is now worth 25*l.* per fm.; this looks well for the 20 cross-cut, which is being driven north to cut the same part of the lode. Our prospects to-day are still more cheering, and should they continue we shall soon be in a much better position. Our this day's sale of tin will be about the same as the last.

PROSPER UNITED.—W. H. Martin, June 13: The adit, or open cut for draining off the surface water, is still being continued towards the south boundary of the sett, in which the ground is easy for excavating, and now let at 12*s.* per fm. The sumpmen are still engaged preparing and fixing the house and drop lifts, which will soon be in readiness for the engine. Respecting the pumping-engines, &c., there is but little more to do to get the one on Louisa's shaft ready to work, and the engineers are now busily engaged putting together with all speed the engine at Hoskings's shaft, in order that the both pumping-engines shall work at the time appointed—early in next month. We continue building the houses for the whim-engines, but cannot make so much progress as desired in consequence of our inability to procure masons. We shall urge on all the operations as fast as possible.

REDMOOR.—T. Taylor, June 10: The ground in the 40 west, on Johnson's lode, is a little improved, and the lode producing some good stones of tin. In the 70 west we are desuing the lode. The lode in the 80 west is worth 10*l.* per fm. No important alteration in the tribute workings.

RHOSWYDOL AND BACHEIDDON.—E. Davis: In the 15 fm. level cross-cut 1 fm. was driven further, cutting through a south lode, and penetrating the killas; this lode, as before stated, has a much better appearance than the first lode cut: the latter had no ore when cut, but the lode we are now working on has a sprinking of lead ore, which will improve as we open east and west on its course. In the end of the 15 west the men have been taking down another width of the lode for a length of 16 fms. 2 ft. 6 in. showing some bunches of lead ore and patches of barren ground mixed together. In the backs of the 15 west 2 fms. 5 ft. 4 in. of orey ground was stopped; lode large, orey, and producing 30 cwts. per fathom. We have since had a heavy fall of ground in the 15, which stopped our regular works for some days; it is now cleared, so that we shall go on as before. The stope in the bottom of the 70 west yielded 25 cwts. per fathom for 1 fm. 4 ft. 8 in.; 1 fathom was cross-cut through the lode in the side of the level to test it, and in Isaac Evans's stope 5 ft. 4 in. crossed, 2 fms. 0 ft. 10 in. driven, and 1 fm. 4 feet 10 in. of orey ground stopped, producing from from 5 to 35 cwts. of ore per fathom. In another old stope further west 3 fms. 4 ft. 6 in. was driven east in a barren part of the lode, to prove whether a bunch of ore was not left behind, and some strings of lead ore were cut, but not to value. In the 65 fm. level 1 fm. 5 feet was driven east in a good-looking lode, yielding 20 cwts. per fathom. In the bottom of the 65, west of the whim-shaft, 5 fms. 3 ft. of orey ground was broken, producing about 10 cwts. per fathom. Our machinery has worked well, but we were never worse off for water; the showers we get are so few and far between that we have hardly any addition. Certainly the best supply has been given during the past four or five days. The want of crushing power throws us back in our dressing, and limits our underground works, as it is useless to break more stuff than we can crush. In addition to the 16 tons shipped per Dovey packet, we have to-day about 9 tons dressed; this will be added to and shipped in a few days.—Settings for June: In the 15 cross-cut, two men to drive west on the south lode, at 110*s.* per fm. In the 15 west, six men to stope in the back and side, at 50*s.* per fathom. The 15 to six men, to cross-cut south, at 110*s.* per fathom. The 70 west to four men, to stope in the back, at 30*s.* per fathom. The 70 west to two men, to stope in the bottom, at 50*s.* per fathom. The 65 to four men, to sink a winze in the bottom, at 110*s.* per fathom. The 65 to four men, to stope in the side, at 9*s.* per foot. The 65 to two men, to stope in the bottom of the level, at 55*s.* per fathom.

RIBDEN.—R. Niness, June 13: The lode in the 62, west of Gilbert's, is at this time intersected by a cross-lode, which causes it to be somewhat unsettled; but, notwithstanding, I consider it a good indication for the production of minerals.

ROSEWARNE CONSOLS.—J. Richards: The branch at Hollow's shaft is not so good as it was, consequently we shall not sell so much tin this month as we expected. No change whatever elsewhere. We are pushing on the two shafts with all speed, and the lode continues most promising, with good stones of copper ore.

ROSEWARNE UNITED.—June 13: We had yesterday an improvement in the 58, west of Richards's, but have not seen sufficient of it as yet to say its value. No change in any other part of the mine to notice since last reported on. The tribute department is looking well, and yielding a fair quantity of copper ore.

ROUND HILL.—R. Waters: In the 62, driving north of the engine-shaft, the lode is 2 ft. wide, letting out a strong flow of water, and yielding 10 cwts. of lead ore per fm. The stope in the back of this level, south of Bennett's winze, will yield 15 cwts. of ore per fm. In the stope in the back of the 64, south of the shaft, the lode continues large, and yielding about 12 cwts. of ore per fm. In the sump sinking below this level the lode looks well, worth quite 25 cwts. of lead ore per fathom: the water at this point is very little, which is a great advantage. Garner's stope, in the back of the 52, north of the middle sump, north of engine-shaft, has fallen off in value, now worth 15 cwts. of lead ore per fathom. Davis's stope, in the back of the 40, north and south of the middle sump, will yield 25 cwts. of ore per fm. The 40 end, driving south of the said sump, will yield 1 ton of ore per fm. All other places are without change to notice. Our ore, computed 30 tons, is for sale on Tuesday next, June 18.

SIGFORD CONSOLS.—W. Hosking, June 13: We have discovered Smith's Wood south tin lode in this mine, and find it to be about 4 feet wide; we have broken several tons of lode stuff from the same, which produces good work for tin; this looks well for Sigford. We have not taken down any of the north copper lode in the adit end east for the last fortnight; the lode in the engine-shaft is just as it has been for some time past.

SORTRIDGE CONSOLS.—J. Richards, June 13: Hitchins's Engine-shaft: In the 110 east the lode is intersected to the east of the cross-course; it is composed of capel, prian, quartz, mundic, and a small proportion of copper ore. In Nicholls's cross-cut south, in the 74 east, the ground continues favourable for progress. In the 62 west the lode is 2 feet wide, and consists of capel, mundic, and quartz. In the 50 east, west of Crew's cross-cut, on the south part of the lode, the lode is not yet met with to the west of the cross-course. In the 50 east, and east of Crew's cross-cut, on the south part of the lode, the lode is worth ½ ton of ore per fm. In the 40, west of Head's rise, on the south part of the lode, the lode is 18 inches wide, and yields good stones of ore. In the 40, east of Head's rise, on the south part of the lode, the lode has been taken down, and proves to be a good course of ore, worth 3 tons, or 30*l.* per fm. In the 50 east, west of Collom's cross-cut, on the north part of the lode, the lode is 3 feet wide, and worth 1 ton of ore per fm. In the 40 east, and east of Gilbert's cross-cut, on the north part of the lode, the lode is 1 ft. wide, and yields a little ore. In the 20 west, and west of Arthur's cross-cut, on the south part of the lode, the lode is worth ⅛ ton per fathom.—No. 2 South Lode: In the 50 east, west of Mayne's cross-cut, the lode is 2 feet wide, and of a more promising character, being composed of quartz, gossan, mundic, and a little black oxide of copper. In Blanchard's stope, in bottom of the 40, the lode is worth 1 ton of ore per fathom. In Rowe's stope, in back of the 40, the lode is worth 2 tons of ore per fathom. In the 30 east the lode is 18 inches wide, and consists principally of gossan and ore, saving work.

SOUTH BRYN GWIOG.—J. Lloyd, June 11: The east level is still producing ribs of ore about 1 to 2 in. wide, and looks very promising for further improvement. The water in the main shaft is not quite cleared, but we hourly expect it to be free, when we shall communicate our propositions for further progress.

SOUTH CARADON WHEAL HOOPER.—W. C. Cock, June 8: We are making very fair progress in sinking the engine-shaft. The lode in the 62, east and west, is small, and spotted with copper ore. The granite in the western end is of a very congenial character; the eastern end is still in elvan. The 47 cross-cut is just as last reported.

SOUTH CARN BREA. T. Glanville, June 8: Tutwork Setting for June: The new shaft to sink by 12 men, at 45*l.* per fm. The 68 cross-cut to drive south towards the new shaft by four men, at 16*l.* per fm. The winze to sink under the 48 by four men, at 7*l.* per fm. The 20 to drive west of the flat-rod shaft, by six men, at 3*l.* per fathom. All the landing at the steam-whim by two men, at 3*l.* 5*s.* per month. All the filling in the mine by four men, at 10*l.* per month.

SOUTH CRENVER.—E. Chegwin, June 11: The flat-rod shaft is now down 7 fms. 1 ft. 6 in. below the 105; lode 2 ft. wide, producing good stones of copper ore. The 105 is driven 11⅛ fms. east of flat-rod shaft; the lode in the end is 1 ft. wide, producing stones of copper ore. Our tribute pitches in bottom of the 105 are looking well; we are only taking away the ore 8 fms. below the level, but as the ore is lengthening east and west, we have tributers working in the ends of ground, and leaving a fine bunch of ore going down, and when the flat-rod shaft is down to the 125 this ore can be taken away at about 5*s.* in 1*l.*—South Mine: In the 51 cross-cut we have cut the lode; there is so much water flowing from it that it rose 2 fms. above the level, so that we cannot ascertain he size or value of it, but in a day or two we expect to drain the water and cut through it.

SOUTH WHEAL KITTY (Lelant).—C. R. Webb, S. Mitchell, jun., June 12: Since last setting we have cleared and secured 30 fms. of the adit level, which was nearly all choked, in consequence of the old men's stulls having broken down. This brought us forth within 3 or 4 fms. of White Thorne shaft; we hope to have communication to the latter in a week. This being done will be very beneficial to our progress, as we shall draw the stuff through it, and, secondly, ventilation for air. We think the time is not far distant when we shall reach the adit end. A few small arches left in the back are very good for tin, worth 5*l.* per ton of stuff. The north lode, at Webb's shaft, is still improving in size and value, and is now worth 6*l.* per fm. At our setting last Saturday, June 8, we set the following bargains:—Webb's shaft to cut down and sink on the north lode, by six men, at 40*l.* for 10 fms.; the takers to fix all timber that may be required to make it secure for an engine-shaft. White Thorne shaft to clear and secure by three men, at 15*s.* per fm.

ST. DAY UNITED.—F. Pryor, E. Ralph, J. Cock, T. Gilbert, June 8: Billings's shaft still continues to be worth full 30*l.* per fm. The 154 end end, west of this shaft, is driving on the north part of the lode; we are glad to say it has drained the winze sinking below the level above, and in advance of the end; when we take down the whole of the lode we expect to report it of pretty good value: the winze, although not on the part on which we are driving, is worth 15*l.* per fm. We have to-day intersected a lode in the 104 in Wheal Unity, which we consider is Garby's lode, and is producing good stones of ore, which the men have now brought up; we shall see more of it in a day or two, when we will report as to its value. The 114, in Wheal Unity district, is also considerably improved, and if we may attach any value as to its appearance, and as well the position, judging from what this lode has produced in the levels above, we have a right to expect something good.

ST. IVES WHEAL ALLEN.—H. Taylor, June 12: Roderick's engine-shaft is sunk about 10 ft. below the 10; here the lode is 6 in. wide, worth fully 4*l.* per fm., and from present appearances it will soon improve. The lode in the 50, west of Giesler's shaft, is 10 in. wide, unproductive, but its appearance is very promising for an early change for the better; we calculate about 3 fms. more to drive to get under the tin ground in the 40. In the 50, east of Giesler's shaft, the lode is 30 in. wide, worth fully 8*l.* to 10*l.* per fm. The lode in the 40, west of Giesler's shaft, is about 18 in. wide, producing tin, but not enough to value; the indications here are such as to expect a change for improvement soon. In the 40, east of Louisa shaft, on the cross-course, we have intersected a branch wit tin in it, but not enough to value. The tin in the winze sinking below the 30 has taken at eastern dip; at present the lode is worth 16*l.* per fm. Louisa shaft will be cleared, and ladder-road fixed to the 20, in a day or two. Nothing new in the deep adit north of Highburrow shaft, on the cross-course. The masons have completed the building and roofing of the steam stamps-house, and our engineers are now busily engaged putting in the engine, &c. On the whole, our prospects are good, and the mine in several points is improving.

TOLCARNE.—June 12: Field's Shaft: The driving, casing, and footway has been completed from the 20 to the 30. The lode in the 30, both east and west, produces 1 ton of good ore per fathom, and promising for further improvement. In the 20 east the lode is 1 foot big, composed of gossan and spar, and spots of black ore—a kindly lode. The lode in the 20 west in 20 inches wide, composed of gossan and soft spar, producing good stones of grey ore, but not to value, although it is a very kindly end, and from which we expect something better shortly. The lode in the 10 east is small, and unproductive.—King's Lode: In the rise in back of the adit level east, towards King's shaft, the lode is 10 inches wide, composed chiefly of gossan.—Enthoven's Lode: The stope in back of the adit level east is worth for tin fully 30*l.* per fathom. We are stripping down the south side of the adit level west, which is also worth 30*l.* per fathom for tin.

TRIMLEY HALL.—T. P. Thomas, June 13: The shaft is now completely timbered and secured to the bottom; the lode is looking very promising, producing occasional spots of lead, and likely to be productive in a little further sinking. The winze, or sump below the adit level, is now securely timbered, and we have resumed sinking the same, in order to drive a level 10 fms. below, through the course of ore seen and driven through above.

TREGARDOCK.—Capt. Goldsworthy, June 11: The ground in the cross-cut is very wet; therefore, we can only make slow progress in driving it. I am very much pleased to inform you that in sinking a shode pit from surface we have met with a good improvement, where the lode is 2 feet wide, composed of spar, prian, and gossan, with a good flookan on each side of the lode, on a good branch of lead running through the lode, where we have broken a very good pile of lead during the week, which I consider to be a great improvement to the mine, as it is in the eastern ground, and just west of the junction. It appears the eastern ground is the most productive part of the sett, where I believe, if proved, we shall have altogether a new mine, and a most productive one.

TRELOWETH.—T. Richards, W. Rosewarne, June 8: The lode in the engine-shaft, sinking below the 134, is yielding stones of copper ore. The lode in the 134 east is worth 14*l.* per fm. The lode in the 134 west contains stones of copper ore—a very promising lode. The lode in the 124 east is worth 15*l.* per fm. The lode in the 124 west is worth 8*l.* per fm. The lode in the winze sinking below the 124 west is worth 15*l.* per fathom. The lode in the 80, west of Woodfall's, west of the cross-course, is worth 8*l.* per fm. for the width we have cut into it; this is a very promising lode, and a marked improvement from when cut in the 70. The stope in back of 134 east is worth 12*l.* per fm. The stope in back of the 134, east of winze, is worth 14*l.* per fm. The stope in back of the 124 east is worth 20*l.* per fm. The stope in bottom of the 116 east is worth 12*l.* per fm.

— T. Richards, June 13: The engine-shaft in sinking below the 134 is again improved; we have discovered an ore-course on the north part of the lode, 12 inches wide, in the eastern end of the shaft, and should it continue for the whole length of the shaft it would be worth 25*l.* to 30*l.* per fathom; by Saturday next I purpose again giving you full particulars. The lode in the 134 end east is worth 15*l.* per fm. The 134 west is still unproductive. The 124 end east is again improved, and worth 25*l.* per fm. The winze sinking below the 124 west is worth 15*l.* per fm. The 124 end west is producing good stones of ore. The lode is cut through in the 80, which is 8 feet wide, but the part containing the copper ore is 2½ feet wide on the north side of the lode; it is worth 9*l.* to 10*l.* per fm.; we shall at once drive west upon it, in ground that can be driven for 30*l.* per fm.; consequently, provided the ground continues so easy for exploring, we shall extend west rapidly, and soon prove its value at this point of operations. The stope in back of the 134 east is worth 9*l.* per fm.; the stope in back of the 124, east of winze, is worth 15*l* per fm.; the stope in back of the 124 east is worth 20*l.* per fathom; the stope in the bottom of the 116 east is worth 10*l.* per fm.

TRENCROM.—R. Hollow, F. Bennetts, June 13: At Giesler's engine-shaft, sinking below the 90, the lode is not to value. In the 90, east of the engine-shaft, the lode is worth 3*l.* per fathom. In the 80, east of the engine-shaft, the lode is worth 3*l.* 10*s.* per fathom. In the 80, west of the engine-shaft, the lode is worth 2*l.* per fathom. The 60 cross-cut south, east of the engine-shaft, is cleared to the end, but nothing has been seen for the length of the cross-cut to notice as a lode. In the 40, east of the engine-shaft, the lode is worth 2*l.* per fathom. At Hollow's shaft, sinking below the 10, the ground is improved for sinking; the lode is not to value. In the 20, east of Micheil's flat-rod shaft, the lode is worth 7*l.* per fathom. In the 20, west of the flat-rod shaft, the lode is unproductive. In the 10, east of the flat-rod shaft, the lode is producing saving work.

TREVOOLE.—H. Stephens, J. Lean, June 13: There is no change to notice in any of our operations here except at Stephens's shaft, sinking below the 50, which continues to improve; the quality of the ore is good, and the discovery bids fair to be one of great importance.

TRUMPET UNITED.—G. R. Odgers, June 8: During the past week we have been engaged fixing a standing-lift at the engine-shaft. In the 15 east we have had a good branch of tin. All other bargains are progressing satisfactorily, but without change.

UNITED MINES (Tavistock).—J. Tucker, June 12: The standing-lift is fixed at the 60, the water taken up, &c., and the men are now in a position to make rapid progress in sinking. The lode in the 60 east is still improving in form and width, but it is not far enough advanced from the influence of the spar and cross-course, referred to in my late reports, to be of any value. The two men are removed from the 18 north to drive west at this (60) level, but as no lode has been taken down, I can say nothing beyond what I said of it last week—a strong tinny lode. Scarcely enough of the lode has been taken down in the winze in bottom of the 48 to enable me to determine its value, but I am quite safe in stating it is worth 15*l.* per fm.; the reason why I did not sink where it is worth from 35*l.* to 40*l.* per fm. is that there is not so good room for the tackle-plat, and to widen the gunnis is to endanger the stull above. There is no other change to report in the mine.

VALE OF TOWY.—A. Waters, T. Harvey, June 11: Clay's shaftmen are engaged cutting plat in the 100, and calculate completing the same this week. We shall be in a position to resume sinking the engine-shaft in about a fortnight from this date. The 90, driving south of great cross-course, is within about 5 fathoms of Field's shaft; lode composed of decomposed elvan, barytes, gossan, and lead ore—tribute ground. In the 80, driving north of engine-shaft, the lode is 5 feet wide, yielding occasional stones of lead ore. Field's shaft, sinking below the 80, is down 5 fathoms; lode large and orey, tribute ground. In the cross-cut driven east in the 80, south of said shaft, we have intersected a branch 1 foot wide, yielding rich work for lead ore; we shall see more of this in course of the week, and write more fully on it in our next. In the winze sinking below the 80, north of Bonville's, the lode is 2½ feet wide, opening tribute ground. No change in the winze sinking below the 70, south of the above shaft. We have let two pitches, at tributes varying from 60*s.* to 130*s.* per ton of lead ore.

WENTNOR.—T. Pierce, June 13: We have a great improvement in Grosvenor shaft, sinking on the dip of the lode; there is more spar in the vein, which is of a stronger character, and is looking well for further improvement. We have put up a trial rise in the 64 yard level about 12 yards behind the end, in the hope of cutting into the flat of ore which the old men had for many fathoms around Grosvenor shaft; from the character of the lode in this level, now extended 208 yards west of that shaft, we were induced to push the level ahead, on the assumption that the flat of ore just referred to continued its dip west, and everything led us to suppose that a few yards extra would develope good ore; the lode in the present forebreast is of the same kindly character, but on consultation at the mine on Saturday last it was determined to put up a rise in the lode, and which we commenced to do on Monday. I am glad to say that the ground improves as the rise gets up; we have a rib of spar 2 ft. wide on the heading side of the lode, and every indication favourable to a deposit of ore. There is no alteration of importance in the south cross-cut.

WEST BASSET.—W. Roberts, June 12: In the 104, west of Percy's shaft, the lode is 3 ft. wide, producing 1⅛ ton of ore per fm. The 94 west produces 1 ton, and is promising for further improvement. In the 84 west the lode is 4 ft. wide, producing 3 tons of ore per fathom. In the 75 west the lode is 3 ft. wide, tribute ground. In the 65 west the lode is 4 ft. wide, at present unproductive. The rise in back of the 65, and the winze sinking under the 52, are opening good tribute ground.—South Lode: In the 84 west the lode is 1 ft. wide, worth 1 ton per fm. In the winze sinking under the 84 the lode is nearly 1 ft. wide, producing stones of good ore.

WEST CONDURROW. -G. Jewell, June 13: The lode in the engine-shaft is 3 feet wide, composed of spar and prian, with red flookan, producing saving work for tin, and impregnated with copper ore. In the 12, west of the engine-shaft, the lode is 2 ft. wide, and producing good saving work for tin. In the 24, west of Purser's shaft, the lode is 2 feet wide, looking very promising, and is impregnated with copper ore. In the 24, east of Purser's shaft, the lode is from 2 to 3 feet wide, composed of spar, prian, flookan, and sprigs of ore.

WEST SNAILBEACH.—J. Richards, June 13: In sinking the engine-shaft below the 64 the ground is somewhat harder; several branches of spar are crossing the shaft, and letting out a quantity of water, which has caused a little impediment in our sinking this last week or nine days. A change has taken place in the 64, driving east on the north lode; a lode has crossed the end in an oblique direction about 1 foot wide, and is composed of carbonate of lime, blende, and occasional stones of lead ore; this lode we shall meet with by continuing our south lode east in the same level. We have a change already on the south lode, driving east in the 64; a quantity of water is coming from the end, and the ground is harder, from the nature of the lode it appears to be approaching the ore-bearing ground.

WEST TREVELYAN.—J. D. Osborn, June 8: The 58, west of Cater's engine-shaft, is driven 11 fms.; no lode taken down this week. In the 48 west the lode is 2 ft. wide, composed of quartz, prian, and a little copper ore, but not looking quite so well as last reported. The stopes in back of said level, west of No. 3 winze, are worth for ore 12*l.* per fathom. The stopes east of No. 3 winze are worth for ore 6*l.* per fm. The stopes west of No. 2 winze are worth for ore 10*l.* per fm. In the winze sinking below the 48 there has been no lode taken down this week. In the cross-cut driving north from Cater's, at the 28, the ground is favourable for driving. In the cross-cut driving south from Park shaft we have to-day cut a branch producing a little tin; when we have opened more ground on it we shall be able to say something about its value.

WEST WENDRON CONSOLS.—R. Kendall, J. Hore, June 10: We have cut down the engine-shaft, and shall now sink 3 ft. deeper, and fix the lift. The flat-rod shaft is sunk 3 ft. and come to water; we intend, if possible, to clear in the north adit to this shaft before we put the rods to work, which we hope to do this month; by clearing this adit we shall save 8 fms. of pitwork. We have been clearing the adit this week, east behind the smiths' shop, into the old workings.

WEST WHEAL JANE.—J. Tonkin, J. Smith, June 8: There is no change in the levels in the west part of the mine. We have a very good tin lode in the 10 at Painter's, and shall soon have six men driving west, and six men driving east on it, and shall go on as soon as possible to sink below the 10.

WEST WHEAL MARGARET.—Capts. Uren and White, June 11: The casing and dividing of Hallett's shaft below the 20, fixing footway, &c., are all completed, and the men have just commenced to drive the 30 east and west. The ground in these ends is favourable for driving, and the lode a little improved in size and value; we hope to lay open some good tin ground here. There is no particular change in the western part of the mine since our last advice.

WHEAL AGAR.—W. Roberts, June 12: In the 80 west the lode is 3 ft. wide, producing 1⅛ ton of ore per fm.; in the same level driving east the lode is 4 ft. wide, producing 3 tons of ore per fm. Other parts are progressing favourably, but without any change to notice since last reported.

WHEAL ARTHUR.—T. Carpenter, June 11: Old Lode: The lode in the 50 east is very much improved since I wrote you last; it is now 4 ft. wide, composed of spar, prian, mundic, and copper ore, worth of the latter 1 ton per fm., and showing every indication of a further improvement shortly. Hooper's rise in adit level, west of cross-course, is up 7 ft. above the back of the level, where the lode is 4 ft. wide, yielding 1⅛ ton of copper ore per fm. The lode in Burley's rise, in back of adit west, 7 fms. east of cross-course, is 2½ ft. wide, yielding 7 tons of copper ore per fm. for the length of the rise, 18 ft.—North Lode: The lode in Palmer's stope, in back of adit west, is 4 ft. wide, producing 1⅛ ton of copper ore per fm. We are getting on with our dressing as fast as possible, in order to get a good parcel of ore ready to sample by the end of this month.

WHEAL ANNE (St. Austell).—H. B. Grose, June 12: We have cut Allen's lode in the shallow adit, which is 6 ft. wide, good work for tin, worth 10*l.* per fm., and very speedy for taking away. The north lode, which we are now driving on, is 3 ft. wide, good stamps work, and looking kindly to improve. We are progressing satisfactorily with our surface works; the masons are getting on with the wheel-pit, and I think will complete it in the time allowed them, by which time we shall have all things in readiness to heave in the wheel and stamps, and put it to work to make returns, which will be the best proof of the value of the mine.

WHEAL CONCORD.—Capt. Luke, June 11: A great improvement has taken place at Collacombe, in the bottom of the mine; and looking at the position of the valley between that mine and the Concord, I do feel that this is a property of great prospective value. The water is forked 16 fms. below adit, and we are rapidly progressing towards emptying the mine.

WHEAL CREBOR.—J. Gifford: In the 60 west the lode is 4 feet wide, composed of capel, quartz, and mundic, with spots of copper ore intermixed, a kindly lode. In the 60 east the lode is 3½ ft. wide, 1½ ft. on the north side saving work for copper ore; the south part is composed of capel, quartz, white iron, and mundic, altogether a very promising lode. There is no alteration in either of the 48 fm. levels to report on since my last.

WHEAL EDWARD.—M. H. East, June 8: South Lode: In the 81 west the lode is 4 feet wide, composed of capel, spar, mundic, and stones of ore—driving by four men, at 6*l.* per fm. In the 71 west the lode is worth from 4 to 5 tons of ore per fm.—driving by six men, at 11*l.* per fm. In the 61 west the lode is worth 2½ tons of ore per fm., worth 5*l.* per ton—driving by four men, at 8*l.* per fm.; in the 61 east the lode is small and unproductive—driving by four men, at 4*l.* 10*s.* per fm. The 50, east of Jones's rise, is set to four men, at 6*l.* 10*s.* per fm. The main lode is not sufficiently opened on east of the caunter to ascertain its value, but so far as seen it is worth 2 tons of good ore per fm. In the 50 west the lode is large, and producing good stones of ore—driving by four men, at 6*l.* per fm. In the 40 east the lode is worth 3 tons of ore per fm.—driving by four men, at 4*l.* 10*s.* per fm. A communication having been made with this level to the 50 in the tribute pitch, I have thought it best to set all the ground on tutwork for the present, and there are three stopes set—No. 1, below the 40 east, to four men, at 2*l.* per fm.; and Nos. 1 and 2, in back of same level, to eight men, at 40*l.* per fm.; the lode on the average, at each point will yield from 3 to 4 tons of ore per fm.—North Lode: In the boundary cross-cut north the ground is not so easy, although it is now very favourable for progress—driving by two men, at 30*l.* per fathom. In the 52 west the lode is 1½ ft. wide, and looks very promising—driving by four men, at 4*l.* 10*s.* per fm. There are four tribute pitches set to ten men, for two months, at an average tribute of 8*s.* 6*d.* in 1*l.* All the tramming, wheeling, filling, and landing is set to seven men for two months, at 26*l.* 10*s.* per month. The machinery throughout the mine is in good working condition.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, June 8: The lode in the engine-shaft, sinking below the 100, is about 2 ft. wide, composed of quartz, &c., with stones of ore. The lode in the 100 east is 20 in. wide, principally quartz, but producing occasional stones of ore. The rise above the 100 west is producing full 1 ton of good ore per fathom. The lode in the rise above the 90 is 18 in. wide, producing a little ore; no lode has been taken down this week in the stope at this level, west of the shaft. The lode in the 90 west is 10 in. wide, of mundic and peach, with stones of ore. The lode in the flat-rod shaft is split into branches; it is not deep enough to get settled. At 20 fms. north of the above the lode is 15 in. wide, of sugary spar, &c., underlying south about 2 ft. to the fm., with a bearing of about 5° north of west. At 7 fms. north of the last we have intersected another lode altogether 9 ft. wide, underlying south from 2 to 2½ ft. to the fm., with a bearing of 5° north of east; these we take to be an important feature to the mine.

WHEAL GRYLLS.—E. Rogers, J. Pope, June 13: In the 20, east of Annie's engine-shaft, the lode is worth 6*l.* per fm.; in the end west the lode is worth 5*l.* per fm. In Fisher's whim-shaft the lode is small and poor. The flat-rod shaft is sunk 2 fms. 5 ft. below the 10. In the end driving east of this shaft, in the 10, the lode is 18 in. wide, yielding a little tin, but not rich. At Gryll's whim-shaft, in the two ends driving east and west in the 10, the lode is worth about 30*s.* per fm. We are expecting an improvement in these ends shortly, as there are two winzes gown down in the bottom of the adit which has passed through ground that will be taken away at a low tribute.—Mill Pool Standard Lode: In the 35, west of the western shaff, the lode is worth 2*l.* 10*s.* per fm.; in this level east the lode is worth 4*l.* per fm. In the stopes in back, No. 1 is worth 5*l.* per fm., and No. 2, 4*l.* per fm. In the 30, driving east, there has been no lode taken down since last reported on. In the two stopes in the back of this level they are also discovering the lode.—Georgia Lode: In the stopes in back of the 33 there is no alteration; No. 1 is worth 16*l.* per fm., and No. 2*l.*, 14*l.* per fm. We sold on Friday, June 7, 1722 barrows of tinstuff, amounting to 579*l.* 6*s.* 2*d.*

WHEAL HARRIETT.—S. Williams, June 8: The lode in the 110 east end is 2 ft. wide, producing stones of ore. The lode in the winze sinking below the 100, west from cross-cut, is worth 8*l.* per fm. The lode in the 100 east end is worth for tin 20*l.* per fm. The lode in the 90 east end is producing stones of ore, not sufficient to value. The lode in the stopes above the 100 is worth for tin and copper ore 30*l.* per fm. The lode in the 30 east is unproductive. The lode in the stope above the deep adit is worth 8*l.* per fm.

WHEAL MOYLE.—J. Michell: The stopes in the back of the 12, east and west of Michell's shaft, are looking very well, and worth full 30*l.* per fm.; stoping by ten men, at 45*s.* per fathom. The steam-stamps are working first-rate, and the work stamping is looking very well indeed.

WHEAL NORRIS.—J. Nance, J. Andrews, June 8: At our setting to-day we have set the following bargains:—The 15 cross-cut, to drive north of the Cremorne engine-shaft, set to six men, at 12*l.* 10*s.* per fm., and to drive south of said shaft, set to six men, at 2*l.* 10*s.* per fm. Carter's engine-shaft, set to sink by nine men, at 25*l.* per fm.; the adit end, east of Carter's shaft, set to drive by four men, at 4*l.* per fm. The No. 1 stope, in the back of the said adit, set to six men, at 2*l.* 10*s.* per fm.; and No. 2 stope, set to four men, at 2*l.* 10*s.* per fm. The 15, to drive east of the flat-rod shaft, set to four men, at 3*l.* 15*s.* per fm., and west to four men, at 3*l.* 10*s.* per fm.; the stope in back of said level, set to four men, at 2*l.* 10*s.* per fm. To cut through the No. 4 lode, at the adit level, set to four men, at 2*l.* 10*s.* per fm., and to drive the adit cross-cut north, set to two men, at 4*l.* per fm. The No. 3 lode, in the adit end east, is at present poor, being disordered by the cross-course; but this lode, in the back stopes, continues to yield fair quality tinstuff, worth on an average 13*l.* per fm. The lode in the east end, at the 15 (flat-rod shaft), is worth about 8*l.* per fm., and at the west end, 6*l.* per fm., and it is about the same value in the back stope.

WHEAL POLLARD.—W. C. Cock, June 10: The ground in the 55 cross-cut south is still very hard, but I hope to see a favourable change here soon; set 1 fm., at 15*l.* The 35 cross-cut north is something better for progress, and I am beginning to hope that we are nearing a better channel of ground; set 1 fm., at 13*l.* 10*s.*, last price 16*l.*

WHEAL PROSPER.—H. Stephens, E. Williams, June 12: The 20, east of the engine-shaft, is worth 6*l.* per fathom for tin, with good stones of copper ore. The sump-winze, sinking below the 20, is improving, worth 10*l.* per fathom for tin, with strong indications for a course of copper ore ere long. Mitchell's, sinking below the 20, is worth 24*l.* per fathom; the 20, east of this, is worth 5*l.* per fathom. There is a stong lode in Leed's shaft, sinking below the 10, with good stones of copper ore, but not sufficient to value. We consider, on the whole, the prospects of the mine are good.

WHEAL PROSPIDNICK.—R. Kendall, June 8: Wilson's shaft is about 9 ft. below the 10; the lode for 6 ft. wide and 10 ft. long is worth about 10*l.* per fm. The stope to the west of Wilson's shaft is worth 10*l.* per fm. The lode in the 10, west of Wilson's shaft, has the appearance of coming into the tin ground seen in the bottom of the old men's workings; 2 or 3 fms. more driving will throw more light on this piece of ground. Watson's shaft is 3 fms. below the 12; no lode taken down this week. The lode in the 12, east of Watson's shaft, has passed through a cross-course; the lode is small at present, but letting out a quantity of water, and the lode opening as we drive; I think in a few feet we shall find the lode larger.

WHEAL SHEPHERDS.—H. Bennetts, June 12: The lode in the adit end, east of Rye shaft, is 12 in. wide, composed of jack, fine lead, and pretty blue killas; ground quite congenial for lead, and every indication for a good lode in depth. Our present end is 130 fathoms east of Rye shaft; the air being dead the men cannot work to the best advantage. We have commenced to sink a whim-shaft from the surface, and we hope to have communication to the adit in 11 or 12 weeks from this time. We have set four men to hole, at 2*l.* 10*s.* per fathom.

WHEAL TREMAYNE.—R. Williams, J. Williams, June 10: At the boundary engine-shaft, in the 133 east, on the engine lode, the lode is disordered by a cross-course of spar and flookan. In the 123, east of Allen's shaft, on Allen's branch, we have intersected the cross-course; the branch east of the same has a better appearance, yielding good spots of tin, copper ore, and mundic; it is still in the influence of the cross-course, and we expect it will improve as we advance. The stope west of shaft, on the engine lode, is yielding low price tinstuff. In the 113, east of Allen's shaft, on Allen's branch, the branch is worth 8*l.* per fm.; the stopes in bottom of the same level are worth on an average 14*l.* per fm.; the stopes in back of the same level, on the same branches, are worth on an average 10*l.* per fm. In the cross-cut north of the same level, towards the north branches, there is no change to notice. In the 103 cross-cut north, towards Allen's branch, we have intersected a branch, chiefly composed of mundic, mixed with good branch tin, worth about 6*l.* per fm., and are still driving north; from the appearance of the ground we think there is more branch close by. The foundations at the new engine-shaft are progressing favourably. We have let the carriage and loading of the old engine-house, with the loadings to the new engine-shaft, for 38*l.*

WHEAL UNION.—T. Glanville, June 12: Tutwork Setting for June:—The flat-rod shaft to sink below the 56 by nine men, at 27*l.* per fathom. The 40 to drive east on the middle lode by four men, at 5*l.* per fm. The 40 cross-cut to drive north from middle lode by four men, at 10*l.* per fm. The stopes in back of the 40, on the south lode, by four men, at 2*l.* 10*s.* per fm. The 46 cross-cut to drive south of Moyle's shaft by six men, at 10*l.* per fathom. The 23 cross-cut to drive south from the south engine-shaft by four men, at 10*l.* per fm. The above is a copy of our monthly tutwork setting, with which I beg to hand you report of the mine:—In the flat-rod shaft the lode is 2 ft. wide, composed of spar, mundic, and copper ore, but not enough of the latter to value. In the 40 east the middle lode is 2 ft. wide, composed of spar and mundic, mixed with a little tin and copper ores. In the stopes in the back of the 40 the lode is worth 40*l.* per fm. for tin. The 46 cross-cut is extended 10 fms. south of Moyle's shaft, but have not as yet intersected the Turnpike lode. In driving we are frequently meeting with veins of copper ore, which show the strata to be highly mineralised. In the south part of the sett, the old engine-shaft, sunk 23 fms. below adit by the former adventurers, is gone dry, and we have commenced to drive a cross-cut south, to intersect two lodes seen in the adit level; this I believe to be a good speculation. We sold on June 5, to Trethellan Smelting House, 2 tons 18 cwts. 2 qrs. 26 lbs. of black tin, at 70*l.* per ton=205*l.* 11*s.* 3*d.*

WHEAL UNITY CONSOLS.—W. H. Reynolds, June 8: The shaftmen are still engaged in cutting ground preparatory to fixing a plunger at the 75, which we hope to complete by Wednesday, and then to drive through the cross-course. The stopes in back of the 75 are worth 5*l.* and 8*l.* per fm. respectively. In the 65 east the lode is kindly, and contains good spots of ore occasionally. The lode in the 40 and 50 fm. levels, west of the shaft, is large, with good stones of rich ore; these ends are not quite so far west as the bunch of ore at the 65; they are, however, within a few fathoms of it, and the ore is of the same character. The stopes in back of the 65 will yield upwards of 2 tons of ore per fathom; the produce of a parcel broken from this place being 16⅛ per cent.

YARNER.—R. Barkell, June 12: North Lode: The 30 east is without alteration; the pitch in back of the same level is worth 4 tons per fm.—South Lode: The 30 east and west is the same as when last reported on. The stope in the back, east of shaft, is worth 3 tons per fm.; this is part of John Thomas's pitch, that was refused last survey-day; the sumpmen are stoping here. The 20 west is still worth 3 tons per fm., and likely to continue. Bowden's pitch, in the bottom of this level, will turn out 4 tons per fathom. On the whole, I have never seen the mine looking better, and our prospects are very cheering. We have had a little rain the last day or two, and are forking a little, but we are short of water for crushing and hauling.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

In the LELANT DISTRICT, we find that the DURLO accounts, on Tuesday, showed a credit balance of 376*l.* 19s., after charging a considerable amount of supplies, more than the fair amount for the quarter; as for instance, a cargo of coals only just delivered. No doubt exists of a dividend at the next meeting, and that the mine will make one of the standing dividend mines in the district.——At TRENCROM meeting, last week, Capt. Thomas Richards was reappointed manager, and purser in addition. This will, no doubt, meet the views of many of the large holders, especially those resident in London. It is expected that returns for the ensuing quarter will nearly pay costs. The mine has certainly good prospects, and sales of tin steadily increasing. Nothing can be more surprising than to find holders disposed to sell at quoted prices, (say) 50s., when the actual cost per share is about 10*l.* All the outlay for machinery incurred, and the mine in full working order, with returns very nearly approximating to costs.——At WORVAS DOWNS meeting, on Monday, a call of 15s. per share was made, making 4*l.* 15s. paid-up. The prospects here were announced at the commencement to be unusually good, and it appears that so far as they have gone they prove quite as good as expected. They have discovered a carbona of tin in the 20 fm. level, valued at the meeting at 25*l.* per fathom, and since much improved, showing indications of greater improvement. Other deposits of tin have been found, all of which will prove profitably productive. Bearing in mind that this is only in the 20, it will be seen what excellent prospects there are for success at deeper levels. Being in the same strata as and adjoining Providence, it bids fair to rival it by-and-bye.——PROVIDENCE MINES continue much as usual, and will continue so for some time yet. They are laying out a most excellently planned tin-floors here, with all the latest improvements; and the agents deserve great credit for the excellent manner in which this is being done, especially for their adaptation and improvement in the round buddle.—— EAST MARGARET is suspended.——WHEAL MARGARET is much as usual.——KITTY is looking more promising.——WHEAL MARY is looking very well in the bottom levels. They have a great deal of virgin ground eastwards, and the prospects are very good for profits for many years to come. This old mine is rather a curiosity, for the small number of its shares (only 100) and the quiet steady way in which it is worked.——EAST PROVIDENCE made a call of 2s. on Monday last. If they had been working from the commencement in the present workings so near Providence, they would by this time, doubtless, have had a dividend mine. The best carbona in Providence cannot be far from their workings, and its immediate vicinity with the same congenial ground is undoubtedly a great advantage. The great fall in the price of tin has been a serious injury to the whole of these mines. The dividends ones would have given larger dividends, some now nearly paying costs would pay costs in full, and, on the whole, would generally have looked much brigher but for this.——If the Americans settle their brotherly disputes, and trade revives, so that the price of minerals may recover again, we shall see a great difference in this district. The mines are all most *bona fide*, and worked for legitimate profits, and not market operations.

At WEST CARADON they have a fine course of ore in the 104 cross-cut, worth 25*l.* per fm. Pryor's shaft is looking better, and a course of ore is anticipated; every appearance indicates it.

EAST BROOKWOOD.—A branch of another lode is discovered, of rich yellow copper ore, 1 ft. wide; this, with the previous success, speaks well for the mine.

NEW CROWN HAT (Holywell, Flintshire).—The work at this new mine still progresses very favourably. Good ore is being raised from the new shaft; the first parcel, of from 3 to 4 tons, has been sold, and I am informed the mine will soon be selling ore regularly every month. The ground at No. 3 shaft is also looking well.

EAST TOLGUS.—An excellent discovery has been made at the shaft at this mine. At about 60 fms. below the adit the men are sending up some rich copper ore; the lode is worth 40*l.* per fathom. Such a discovery in the Redruth district gives great hopes of a rich mine, and shares are in demand in consequence.

BENEATHWOOD.—Capt. Lean reports that the men on the stopes in the back of the 30 were desuing the lode; they have since taken it down; it has yielded at the rate of 8 cwts. of lead per fm. This appears to be a continuation of the shoot of ore we had at the 20 and above. Tracing it down from the upper levels, it would appear to dip south but very little; we cannot, therefore, fairly expect the same results at the 40 until the end gets nearly underneath, which is now about 10 fms. behind, although I am glad to say we have a little ore now at the 40, and the ground is becoming more of a lead-bearing character. I have set two men to stope the back of the 20, at 10s. per fm.; the lode carries a good branch of lead in places. Other operations are progressing satisfactorily, and our prospects, I hope, are looking a little better.

BRONFLOYD.—On Thursday 1 ton of the tungstate of lead discovered in this mine was sold at 14*l.* 10s. per ton, the same price as was obtained on Monday for 20 tons of lead ore.

WEST POLMEAR.—The cross-cut at the 20 is being driven south with all speed, to cut the Wheal Polmear lodes. The north lode is being opened on at the 20 east and west; this lode, for the ground opened, has produced a quantity of tin ore, and has produced some fine yellow copper ore.

CUDDRA.—The levels are being driven east and west at the 100 by the side of the lode; it will be taken down in a few days, when the value will be reported. The pumping apparatus at Walker's shaft is now at work, and, therefore, the shaft will be drained and cleared to the bottom in a few days, when the 66 will be driven west through the run of tin ground. The stamps are now in good order, and will be kept constantly at work. The dressing operations will be in order in a few days, after which returns of tin will be made. The parcel of copper ore now for sale will weigh off about 40 tons.

CASARA.—The improvement still holds good. The lode in the 30 north is worth 1 ton of lead ore per fathom. The new lode, in the 30 fm. level south, is worth 15 cwts. per fathom.

NORTH DEVON SILVER-LEAD MINING COMPANY.—The accounts to May 1 show a credit balance of 79*l.* 5s. 10d. Capts. T. Fidler and J. Blamey reported favourably upon the position and prospects of the mine. The company is limited, the nominal capital being 20,000*l.*, in 1*l.* shares.

DING DONG.—The western end, at Qualk shaft, is producing good tin-stuff, and the north branch looks very rich.

BON ACCORD (Australia).—The anticipations referred to last week have already caused a rise of above 150 per cent. in the shares of this mine, which, from circumstances unexplainable, have been comparatively unsaleable for some months past. By those fully conversant with the workings, as also by those who have carefully watched the more recent reports, the shares will, doubtless, be held for much higher prices. The shareholders cannot complain of a want of knowledge of the exact and favourable locality of the property, for with the report issued by order of the directors on May 6 was a surface plan, showing the mine to be immediately north of and adjoining Burra Burra; and seeing that the telegram as to cutting the lode in the 40 was noticed in the last report, and made public in the Journal on May 18, we are really surprised that even the uninitiated should sell by adopting the present system of "bearing," at even the present advanced quotations.

CENTRAL AMERICAN.—The reports announce the discovery of a vein of silver ore worth upwards of 300*l.* per fm.; 5 fms. were sunk in the month, at a cost of less than 2*l.* 10s. per fathom.

GEOLOGICAL SOCIETY.—On Wednesday the following papers will be read:—"On the Lines of Deepest Water around the British Islands," by the Rev. R. Everest, F.G.S.—"On some Volcanic Cones at the foot of Etna," by G. G. Gemmellaro: communicated by Sir C. Lyell, F.G.S.—"On the Ludlow Bone-bed and its Crustacean Remains," by Mr. J. Harley: communicated by Prof. Huxley, Sec. G.S.—"On the Old Red Sandstone of the South of Scotland," by Mr. James Powrie, F.G.S.—"On some Geological Phenomena on the coast of Coromandel, India," by Mr. J. W. B. Dykes, in a letter to Sir C. Lyell, F.G.S.

SOCIETY OF ENGINEERS.—The first *conversazione* of this society was held on Tuesday evening, in the Lower Room, Exeter Hall, and was very numerously attended. There were exhibited on the occasion a large number of models, drawings, and photographs. This society was established in 1854, and now comprises between 200 and 300 members. Much of the success of this now established institution is attributable to the energy and tact of its honorary secretary, Mr. Alfred Williams, and in recognition of the invaluable services thus rendered the members have presented him with a handsome testimonial, which was not the least attractive exhibition of the evening.

THE MANCHESTER AND MILFORD RAILWAY.—All who are interested in Welsh railways will be glad to learn that the works on the Manchester and Milford Haven Railway have been commenced with a determination to carry them out as soon as practicable. The heaviest portion of the line is a tunnel 2200 yards long, between Pontmawr and Pontmeherin, upon which Messrs. Beeston and Son, the contractors, have set a large number of navvies. The boring will occupy about two years; it is not, however, intended to wait so long for the opening of the line. Operations will be pushed forward at the south of Llanidloes, and probably from Pencader to Lampeter, so that under favourable circumstances it is proposed to work a few miles, perhaps at both ends, but certainly at the north, in the course of 12 months. It was very much feared at one time that this line would be abandoned; some unexpected difficulties presented themselves after the passing of the Act, and when their influence was most oppressive rival schemes, infinitely less serviceable to the country, were discussed, upon the assumption that the Manchester and Milford line was an impossibility. The effects of these movements in a district peculiarly sensitive upon railway matters can easily be imagined; but the promoters, and more prominently than any other Mr. Chambers, of Hafod, having strong confidence in the undertaking, persevered, and the works are now in progress, while the opposition projects are known only in local history. To prevent any misunderstanding, it may be necessary to state that the Manchester and Milford line begins at Llanidloes, and goes by way of Devil's Bridge, Tregaron, and Lampeter to Pencader, where it forms a junction with the Carmarthen and Cardigan Railway; it runs at an average distance of 12 miles from the coast, and completes the last link in the chain of communication direct from Milford to Manchester. This is the line upon which the mineral districts of Carmarthenshire and Montgomeryshire depend for means of communication; it is connected with the Welsh Midland, which goes from Llanidloes to Rhayader, Newbridge, Brecon, and Merthyr, and with the Welsh Coast line through Newtown and Machynlleth; it also sends a branch down the Rheidol to Aberystwith. The value of this line to Wales cannot be overstated, and now that it has commenced we anticipate an extension from Pencader to Newcastle Emlyn and Cardigan. But, why should this extension be delayed any longer? It could be accomplished at a comparatively small cost if done by the resident landowners and professional men, who would certainly realise large profits upon the investment, while they would have the satisfaction of improving their property, and conferring immense advantage upon the country.

*** With the Journal of last week a SUPPLEMENTAL SHEET was given, which contains—Loss of Life in Mines—Mining in Wales—Mining in Scotland—Metallurgy of Silver and Lead—The Origin of Mineral Veins—The Past and Present Life of the Globe—Geological Map of the Frongoch District, Cardiganshire—Ancient Geology—Mineral Oils of America and Canada—Mineral Coal—Iron and Iron-Making.

*** With the Journal of May 11 a SUPPLEMENTAL SHEET was given, which contained—A Paper on the Great North Tolgus, and the Redruth and Camborne Mining Districts (with Plan); the Second Part of Mr. J. Y. Watson's Cornish Notes, for Out-Adventurers; Account Keeping and Management in Mines; Seal Locks for Safety-Lamps; the Conclusion of Mr. Ralph Moore's Paper on the Risca Explosion; the Electric Light for Mines; On Blowers, or Outbursts of Fire-Damp in Coal Pits; Walcott's Improvements in Gas Making (with Engraving).

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, June 14, 1861.

COPPER.	£ s. d.
Best selected....p. ton	101 0 0– —
Tough cake..... „	98 0 0– —
Tile ..... „	98 0 0– —
Burra Burra .... „	101 0 0–102 0 0
Copiapo ..... „	95 0 0– —
Copper wire .....p. lb.	0 1 0 –0 1 0½
ditto tubes ..... „	0 1 1 – —
Sheathing & bolts .. „	0 0 11 – —
Bottoms ..... „	0 1 0 – —
Old (Exchange) .... „	0 0 9½– —

IRON.	Per Ton.
Bars, Welsh, in London..	6 5 0– 6 10 0
Ditto, to arrive	5 17 6– —
Nail rods	7 0 0– —
„ Stafford. in London	7 7 6– 7 15 0
Bars ditto	7 10 0– 8 0 0
Hoops ditto	8 10 0– 8 15 0
Sheets, single	9 0 0– 9 15 0
Pig, No. 1, in Wales ..	3 0 0– 4 0 0
Refined metal, ditto....	4 0 0– 5 0 0
Bars, common, ditto....	5 0 0– —
Ditto, merchant, in Tees	6 15 0– 7 0 0
Ditto, railway, in Wales	4 17 6– 5 0 0
Ditto, Swed. in London.	11 5 0–12 0 0
To arrive	11 0 0–11 5 0
Pig, No. 1, in Clyde....	2 8 – 2 10 0
Ditto, f.o.b. in Tees ..	— – –
Ditto, forge, f.o.b. in Tees	— – –
Staffordshire Forge Pig.	3 10 0– 3 12 6
Welsh Forge Pig	— – –

LEAD.	
English Pig	20 10 0–21 15 0
Ditto sheet	21 10 0–22 0 0
Ditto red lead	22 15 0– —
Ditto white	28 10 0–30 0 0
Ditto patent shot	23 10 0–24 0 0
Spanish	19 15 0–20 0 0

BRASS.	Per. lb.
Sheets	9½d.–10d.
Wire	9¼d.–9¼d.
Tubes	10½d.– —

FOREIGN STEEL.	Per Ton.
Swedish, in kegs (rolled)	15 10 0– —
„ (hammered).	16 0 0–16 10 0
Ditto, in faggots	16 10 0–19 0 0
English, Spring	18 0 0–23 0 0
Bessemer's, Engineers Tool	44 0 0– —
„ Spindle	30 0 0– —
QUICKSILVER	7 0 0 p. bottle

SPELTER.	Per Ton.
Foreign	16 0 0– —
To arrive	16 10 0 (Nom.)

ZINC.	
In sheets	23 10 0–24 0 0

TIN.	
English, blocks 125	0 0– —
Ditto, Bars (in barrels)..126	0 0– —
Ditto, Refined 127	0 0– —
Banca 125	0 0– —
Straits 120	0 0– —

TIN-PLATES.*	
IC Charcoal, 1st qua. p. bx.	1 8 6– 1 9 6
IX Ditto 1st quality „	1 14 6– 1 15 6
IX Ditto 2d quality „	1 5 0– 1 7 6
IX Ditto 2d quality „	1 11 0– 1 13 6
IC Coke ..... „	1 2 6– 1 3 0
IX Ditto..... „	1 8 6– 1 9 6
Canada plates ....p. ton	12 10 0–13 0 0

In London; 20s. less at the works.

Yellow Metal Sheathing... p. lb. 9¼d.

Indian Charcoal Pigs in London ..... } 6 12 6– 6 15 0

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—In the Metal Market there is very little alteration, if anything it is, perhaps, a shade better, but the trade is unquestionably very flat indeed. Forced sales are now getting more rare, as the weaker holders have, for the most part, been obliged to realise before this, and stronger sellers are not pressingly eager to accept the present low prices, preferring to hold on in hopes of a reaction taking place ere long.

COPPER.—Transactions in all descriptions of English are of the most limited character, and smelters are very short of orders for manufactured. The fixed rates are still quoted as before, but there is no firmness in the market. Foreign is much neglected, and quotations merely nominal. Yellow metal, inactive and unchanged in price.

LEAD.—English pig not in demand. Low prices continue to be quoted: for ordinery qualities, 20*l.* 10s.; WB, 21*l.* 15s.; *bona fide* buyers might, doubtless, get on even under these rates, as makers are very short of orders to work on. Sheet and shot slow of sale. Spanish pig, 19*l.* 15s. to 20*l.*

IRON.—In railway bars no improvement has taken place, they are still to be bought, delivered free on board in Wales, at 4*l.* 17s. 6d. to 5*l.* per ton. Merchant bars are in pretty good demand at quotations. The present price barely pays cost of production, and, as pig-iron is advancing in value, it is not improbable that higher rates may shortly be asked for bars, especially if orders for rails should become more plentiful. Sales in Staffordshire Iron are limited mostly to small shipping orders for best qualities. No enquiry for inferior kinds. Scotch pigs have assumed an upward tendency; mixed numbers have been quoted 1s. per ton higher than last week—49s. 9d., the market, however, yesterday and to-day is rather easier, 49s. 3d. mixed numbers. Shipping brands are in fair request, at a corresponding advance.

SPELTER.—The market has further receded; sellers for cash to-day at 16*l.*—ZINC, 23*l.* 10s.

TIN.—English descriptions very little enquired for. The fixed price, no doubt, will continue unaltered until the result of the Dutch sale is known, but underselling is pretty general. Foreign is devoid of all animation; speculators do not seem inclined this year to operate (as they sometimes have done) on the chance of the sale price ruling high. Banca, 125*l.*; Straits, 120*l.* nominal.

TIN-PLATES are but slightly in request; price unaltered; 22s. 6d. for IC coke; 28s. 6d. charcoal.

STEEL.—The sales which have lately been made have caused the market to wear a rather less gloomy appearance, and sellers are not so pressing.

The settlement of the fortnightly account in the MINING SHARE MARKET took place on Friday, and was again rather heavy, though since the previous account there has not been so much of mere speculative business carried on. The fine weather, giving promise of an abundant harvest, adds buoyancy and tone to the market, and a still more active state of affairs would ensue but for the feeling of uncertainty in connection with the prices of copper and tin, which seem to be declining. Since our last a fair average amount of business has been transacted in mines which were then prominently before the public, but which prices have not generally been maintained. One or two mines, such as South Frances, Devon Consols, East Tolgus, Wheal Seton, Great Wheal Fortune, Wheal Ludcott, West Caradon, and South Caradon, became in more demand, and at advanced rates. Among speculative shares the most business has been done in East Grenville, West Polmear, Carn Camborne, Sortridge Consols, Crebor, Unity, Calvadnack, Union, &c. West Seton, 360 to 365; at the meeting, on Tuesday, the accounts showed a profit of 4002*l.* 17s. 6d. on the two months, and a dividend of 10*l.* per share was declared, leaving 802*l.* 1s. 8d. in hand. The sale of ore to come into next account will be about 7820*l.* The lode is not yet cut in the 100 cross-cut north, but daily expected, and the country about it is regarded as favourable. The ends, in the aggregate, are not looking so well as they did at the last meeting, and there is nothing in the report to account for the sudden demand and advance in price last week. Wheal Ludcott shares have been in good request, and leave off 3¼ to 3⅜. Devon Great Consols shares have been and are still enquired for, and leave off 370 to 375. Wheal Basset, 90 to 95; the mine is said to be looking better. Wheal Buller, 105 to 110. East Caradon shares were very firm at 28 to 28½, till late on Wednesday afternoon, when they were suddenly put down to 26½, and after many fluctuations they leave off 26½ to 27. The cause of the decline in the market was a report that the 60 ends were not looking so well, and which had its effect upon a "bear" account. The 60 east and west are worth 100*l.* per fathom each end, according to the latest official report, which is not so good by 20*l.* per fm. as it was last week, but still the richest lode in the county, and working for about 4*l.* 10s. per fm. Marke Valley shares, after reaching 10*l.*, declined, and leave off 9 to 9¼. Cook's Kitchen shares have kept steady, and a large business done, leaving off 30¼ to 31¼. In our remarks last week we calculated the shares as 6000ths, and stated, therefore, that the mine had reached a market value of 180,000*l.*, whereas there are only 2450 shares, and the price, therefore, is only about 73,000*l.* for the mine, very little, in comparison with its neighbour, Dolcoath, in the same lode, and which stands at near 200,000*l.* Carn Brea, 87½ to 90; Bryn Gwiog, 33 to 34. South Frances shares have advanced to 137½, 142½; the mine is greatly improving at Pascoe's shaft, that part of the mine to which we have frequently called attention. The 134 is opening out well; the 124, as it gets away from the cross-course, is becoming a good lode, and one or two other improvements taking place. The ends, in the aggregate, are valued at 20 tons per fm.; and a good course of ore in Pascoe's shaft, below the 94. Alfred Consols, 1¼ to 1⅝. Calvadnack shares have advanced to 5, 5¼. East Devon, 2 to 2¼. West Caradon shares at our last were flat at 54 to 56, but rose suddenly to 59, 60, on an improvement being reported in the 104, on Dunstan's lode, but they leave off 55 to 57. East Tolgus shares, which a few days ago were 12*l.* 10s., sellers, have risen to 50*l.*; the lode in the shaft sinking below the 57 is worth 30*l.* per fathom for copper ore. East Basset, 87½ to 92½; East Carn Brea, 7¾ to 8; East Russell, 4 to 4¼; Great Alfred, 10s. to 12s.; Great South Tolgus, 3 to 3⅛; Great Wheal Fortune, 13¼ to 14¼, and have been in request.

Herodsfoot, 39 to 41; at the meeting on the 4th the accounts showed a profit of 2066*l.* 15s. on the four months, and a dividend of 2*l.* per share (2048*l.*) was declared. The agents calculate, from the prospects of the mine, to keep up the present dividend four-monthly. The ends are worth in the aggregate a little over 2 tons of lead ore per fathom. Hingtson Down, 2 to 2½; Lady Bertha, 21s. to 23s.; Merllyn, 14s. to 16s.; North Downs, 4¼ to 4⅜, and enquired for. North Minera, 30s. to 32s. East Grenville have remained pretty quiet. Shares ranged on Monday from 46s. to 47s. 6d.; Tuesday, 45s. to 47s.; Wednesday, 46s. to 48s. Thursday, opened at 45s. 6d., buyers, and declined to 42s. 6d. on receipt of a telegram from the mine, valuing the lode at 1½ ton of copper ore per fm. in the 35. On Friday, they opened at 44s. 6d. to 45s. 6d., and leave off 43s. to 45s. The latest report states that the "35 east contains stones of ore, kindly to improve; the 35 west worth full 1½ ton per fm., and promising; and the 25 west contains stones of ore, a fine looking lode." Wheal Grenville, 2¼ to 2½; the East Grenville lode in this mine is looking very promising. Wheal Crebor has been in request, at 12s. 6d. to 15s. but few sellers met with. The 60 east, getting under where the lode was rich in the 48, and one of the points we referred to at the time, is coming into ore; and the 60 west is also improving. West Polmear have been in demand, and a large business done at 20s. 6d. to 21s. 6d. Great Retallack, 22s. 6d. to 25s.; the report of the mine this week is one of the best ever received, both as regards the bottom levels for blende and the prospects for lead. North Robert, 14s. to 16s. Carn Camborne, 1 to 1⅛, a large business done; the lode in back of the adit is reported worth 12*l.* per fathom for copper, and in a few days the lode will be seen deepest (the 12) below adit. Wheal Norris shares have advanced to 34s., 36s. and a large business done; the mine is holding out good promise. North Treskerby, 23 22 to 24; Pendeen, 5¼ to 5⅜; Providence Mines, 37 to 39; Rosewarne United, 21 to 23; South Caradon, 315 to 320; South Carn Brea, 3⅛ to 3⅜; Stray Park, 34 to 36; Tincroft, 4¾ to 5¼; Wendron Consols, 18 to 20. Sortridge Consols advanced soon after our last from 8s. to 14s., 15s., and after fluctuating a good deal, leave off 12s. 6d. to 15s. The rise is owing to an improvement in the south part of the main lode, driving east in the 40, worth 30*l.* per fathom. The lode will be taken down again on Monday next, when there may probably be another rise. Wheal Polmear, 190 to 200; Wheal Arthur, 10s. to 12s.

Cargoll, 15 to 16; the accounts presented at the meeting show a balance in favour of the company of 1118*l.* 11s. 1d.; and an additional engine is to be erected, instead of a dividend declared. Wheal Mary Ann, 10 to 11; a dividend of 10s. per share was declared at the meeting, and 1141*l.* 19s. 8d. carried to credit of next account. The profit on the quarter's working was 727*l.* 13s. 7d. The report is poor, but an improvement is looked for in the 150, south of Clymo's engine-shaft. Wheal Unity shares have kept pretty steady all the week, and leave off 18s. to 20s.; the 81 tons of ore realised 552*l.* 4s. 6d. on Thursday, the best parcel being 13*l.* 3s. 6d. per ton. But for the fall in the standard a much better price would have been realised. The 40 and 50 ends, driving towards the ore ground, are improving. West Bryn Gwiog, 33 to 35; West Rose Down, 11 to 12; Wheal Clifford, 182½ to 187½. Ashburton United, 16; nominal. At the meeting on June 7 the accounts showed a balance against the mine of 506*l.* 3s. 11d., and an estimate of receipts and expenditure up to September next shows a balance in favour of 313*l.* 16s. 1d. The report states about 30 tons of tin will be sold in the next quarter, and the cost about 600*l.* per month. Wheal Moyle, 2½ to 2⅝; Wheal Sydney, 30s. to 32s. 6d.; Wheal Trelawny, 14¾ to 15½; Wheal Uny, 3¾ to 4¼. New Treleigh, 42s. 6d. to 45s.; at the meeting on the 13th inst. the accounts showed 63*l.* 19s. 6d. in favour to the end of April. No call was made, though the statement of assets and liabilities show that it would have been better to have made one. The report of the mine is favourable, and the next sampling will be 140 tons of good quality copper are. Wheal Union, 3 to 3¼; West Basset, 18¾ to 19¼; Grambler and St. Aubyn, 12 to 13; Tamar Consols, 1¼ to 2. Wheal Treloweth, 3⅜ to 3⅝; the lode in the engine-shaft has improved. United Mines, 30 to 40; at the meeting held on the 12th the accounts showed a loss of 1565*l.* 4s. 7d. on the two months, and a balance against the company of 3318*l.* 7s. 8d. In these accounts (and we called attention to the same circumstances at last meeting) 1700*l.* are charged for coals during the last two months, and 1163*l.* 9s. 6d. for merchants' bills. A call of 5*l.* per share was again made. Long Rake, 10 to 11; the mine is now in fork. Wheal Seton, 67½ to 72½, and in request; at the meeting on the 10th inst. the accounts showed profit on two months 173*l.* 4s. 8d., and a balance in hand of 804*l.* 16s. 6d. Report favourable.

On the Stock Exchange, a moderate amount of business has been transacted in Mining Shares during the week. The following prices were officially recorded in British Mining Shares:—East Caradon, 28, 28¼, 26¾, 26⅝; Margaret, 4⅛, 4; Tamar, 1⅞; West Caradon, 58½, 55⅝; Sortridge, ⅝; East Basset, 90; East Wheal Russell, 4; North Frances, 4; Devon Great Consols, 372, 370. In Colonial Mining Shares the prices were:—Dun Mountain, ⅞, ¾; Great Northern Copper of Australia, 1⅛, 1¼; Kapunda, 2¼, 2⅜; Port Phillip, ¾; Worthing, ⅜; Bon Accord, ¾, ⅞, 1, 1⅛, 1⅛, 1¼; General, 24⅛. In Foreign Mining Shares the prices were:—St. John del Rey, 35⅛, 35; Brazilian ⅞; United Mexican, 5½, 5⅝, 5⅝, 5¼, 5⅜; Linares, 8⅛, 8⅜.

Business has been brisk in Foreign and Colonial Mining Shares, outside, this week, buyers predominating, while in Bon Accord, United Mexican, and Great Northern shares more than an average amount has been done. In the former there has been a considerable advance, the closing quotations being 1⅛ to 1¼, although 1⅛ has been marked during the week. The report from the mine will be found in another column, a perusal of which will hardly warrant the expectation of the present rise being maintained. Great Northern, 1⅛ to 1¼; St. John del Rey, 35 to 35½, quiet in the absence of the usual monthly despatches. Linares, 8⅛ to 8⅜. United Mexican shares have been in demand, at 5⅛ to 5⅜, the advices to hand being of more favourable character. General firm, at 24 to 25; the half-yearly meeting is called for the 27th, when the dividend will be declared. Port Phillip, ⅝ to ¾; Labuan Coal, 2¼ to 3 prem.; the first annual meeting was held on Wednesday, when the directors reported a satisfactory preliminary progress, steps having been taken, according to last advices, to place the plant and machinery to develope the property. East Kongsberg shares are not officially quoted, although since the amicable adjustment of the dispute between the different officials reports have come to hand auguring very favourably for the future of the mines. The East India Coal Company's adjourned meeting has been held, and again adjourned, to enable a satisfactory explanation of matters to be given if possible

At Redruth Ticketing, on Thursday, 3290 tons of ore were sold, realising 17,463*l.* 2s. The particulars of the sale were—Average standard, 126*l.* 16s.; average produce, 6⅜; average price per ton, 5*l.* 6s.; quantity of fine copper, 209 tons 2 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
May 9.....	3143	£134 19 0	6⅝	£6 4 0	£93 8 0
„ 23.....	5622	135 3 0	6	5 5 6	88 17 0
„ 30.....	4675	133 9 0	6¼	5 18 0	91 1 0
June 6.....	4108	132 3 0	5⅞	5 6 0	85 9 0
„ 13.....	3290	126 16 0	6⅜	5 6 0	83 10 0

Compared with the sale of last week, the decline has been in the standard 2*l.* 15s., and in the price per ton of ore about 3s. 4d Compared with the corresponding sale of last month, the decline has been in the standard 9*l.*, and in the price per ton of ore about 11s. 3d.

At West Wheal Seton meeting, on Tuesday, the accounts showed—Balance last audit, 790*l.* 1s. 8d.; copper, tin, and arsenic sold, 8043*l.* 10s. 11d.=8833*l.* 12s. 7d.—Mine cost, merchants' bills, and sundries, 4040*l.* 13s. 5d.: leaving credit balance, 4802*l.* 1s. 8d. The profit on the two months' working was 4002*l.* 17s. 6d. A dividend (the 42d), of 4000*l.* (10*l.* per share) was declared, and 802*l.* 1s. 8d. carried to credit of next account. The amount of copper ores to come to credit of next account will be about 7820*l.* The report shows that the ends are producing 9½ tons per fathom; winzes, 16 tons per fathom; rise in the 110 east, 2 tons per fathom. In the back and bottom of the 100 west there are three stopes, and one in bottom of the 82 east, averaging 11 tons per fm. each. The new lode, in the 110 cross-cut, is expected to be intersected daily. The tribute pitches throughout the mine are much the same as at last account.

At Dolcoath Mine meeting, on Monday, the accounts showed—Balance last audit, 383*l.* 14s. 9d.; copper ore, tin ore, and arsenic sold, 10,951*l.* 14s. 9d.=11,335*l.* 9s. 6d.—Mine cost, merchants' bills, and sundries, 8100*l.* 14s.: leaving credit balance, 3234*l.* 15s. 6d. The profit on the two months' working was 2851*l.* 0s. 9d. A dividend of 2864*l.* (8*l.* per share) was declared, and 370*l.* 15s. 6d. carried to credit of next account.

At Herodsfoot Mine meeting, on June 4 (Mr. M. Loam in the chair), the accounts for the four months ending April showed—Balance last audit, 910*l.* 0s. 1d.;

ore bills received, 4937*l.* 11s. 11d. = 5847*l.* 12s.—February dividend, 1792*l.*; mine cost, merchants' bills, and sundries, 2498*l.* 5s. 1d.: leaving credit balance, 1557*l.* 6s. 11d. The profit on the four months' working was 2066*l.* 15s. A dividend of 2048*l.* (2*l.* per share) was declared, and the balance carried to credit of next account. Capt. Thos. Trevillion reported that, on the whole, he was glad to say the mine in every respect presents appearances which preclude any doubt for the future as to returns and profits, which they may fairly calculate on, and expect the same amount of dividend as now declared.

At Lady Eleanor Lead Mine meeting, on April 30, the accounts for six months, ending April, showed—Subscribed for working the mine, 200*l.*; lead ore sold, 135*l.* 10s. = 335*l.* 10s.—Mine cost, merchants' bills, and sundries, 162*l.* 12s. 3d.: leaving credit balance, 162*l.* 17s. 9d. A dividend of 1*l.* 5s. was declared, and the balance carried forward for working expenses. Capt. John Trevethan reported favourably upon the prospects of the mine; "if their expectations be realised a call will never be required." It was resolved to get the Tack Note renewed for three years.

At Spearn Moor Mine meeting, on June 3, the accounts for the three months ending March, showed—Balance last audit, 154*l.* 19s. 2d.; tin sold (deducting 59*l.* 3s. 11d. dues, at 1-24th), 1361*l.* 10s. 1d.; copper ore sold (deducting 5*l.* 1s. 5d. dues, at 1-18th), 86*l.* 4s. 1d. = 1602*l.* 13s. 4d.—Mine cost, 1068*l.* 11s. 7d.; materials, coals, &c., 245*l.* 19s. 3d.: leaving credit balance, 288*l.* 2s. 6d. A dividend of 280*l.* (1*l.* per share) was declared, and 8*l.* 2s. 6d. carried to the credit of next account. Capts. J. Bennetts and C. Ellis report that, judging from present appearances, they think to return the usual quantity of tin next quarter; they have now 100*l.* of copper ready for sale.

At Wheal Mary Ann meeting, on Tuesday (Mr. Peter Clymo in the chair), the accounts for the three months, ending March, showed—Balance last audit, 999*l.* 4s. 8d.; ore sold, 5914*l.* 8s. 5d. = 6913*l.* 10s. 1d.—Mine cost, merchants' bills, and sundries, 5186*l.* 14s. 10d.: leaving credit balance, 1726*l.* 15s. 3d. A dividend of 512*l.* (10s. per share) was declared, and 1141*l.* 19s. 8d. carried to next account. Capts. Clymo, Hodge, Harris, and Stevens reported that the stopes and pitches were producing much the same as they have for some time past.

At Cargoll Mine meeting, on Monday, the accounts for the three months, ending March, showed—Balance last audit, 680*l.* 16s. 1d.; lead ore sold (deducting 245*l.* 6s. 8d. dues), 3500*l.* 9s. 3d. = 4181*l.* 5s. 4d.—Mine cost, merchants' bills, and sundries, 3062*l.* 14s. 3d.: leaving credit balance, 1118*l.* 11s. 1d. Mr. West, Capt. Loam, the purser, and the manager, were authorised to select and purchase an engine. Capt. John Grose reported that, on Friday last, they sampled 111 tons of lead ore. They have in all 225 persons employed. Capt. R. Tyzzer was appointed assistant captain, at 7*l.* 7s. per month.

At the United Mines meeting, on Tuesday, the accounts showed—Balance last audit, 1485*l.* 3s. 1d.; mine cost, merchants' bills, and sundries, 5979*l.* 14s. 11d.; on account of capstan rope, 268*l.* = 7732*l.* 18s.—Copper, tin, and mundic sold, and sundry receipts, 4414*l.* 10s. 4d.: leaving debit balance, 3318*l.* 7s. 8d. The loss on the two months' working was 1565*l.* 4s. 7d. A call of 5*l.* per share was made. Capt. J. Davey reported on the operations. Six stopes in back and bottom of the 220 will average from 8 to 10 tons per fathom each.

At New Wheal Hender meeting, on Monday, the accounts showed a debit balance of 75*l.* A call of 5s. per share was made.

At the Trelyon Consols Mine meeting, on June 5, the accounts showed—Balance last audit, 12*l.* 9s. 7d.; sundries, 14s. 10d.; tin sold (less dues), 899*l.* 18s. = 913*l.* 2s. 5d.—Mine cost, February, March, and April, 580*l.* 0s. 11d.; merchants' bills, 186*l.* 17s. 2d.; coals, 45*l.* 18s.; carriage, 13*l.* 13s. 8d.; Trelyon Lower Mine cost to end March, 85*l.* 16s. 3d.: leaving credit balance, 16s. 5d. The report of the agents (Capts. R. James and E. Pooley) stated that the prospects were improved at the new shaft, which was the deepest point of operation, and should it continue until they had laid open more ground, there was little doubt of having a dividend mine. The flat-rods, and also the pullies and stands for the new skip leading from the engine to the new shaft, would be complete in ten days from the present date. They had 48 men employed underground. At the Trelyon Lower Mine they had eight men employed, and as soon as the adit was clear and communicated with the 16 fm. level on the north lode, they would increase the number of hands by stoping the tin ground already laid open.

At Wheal Reeth meeting, on Wednesday, a call of 5*l.* per share was made.

At the Buller and Bertha Mine meeting, on June 8, the accounts showed—Balance last audit, 397*l.* 0s. 5d.; mine cost, Jan. to April, 374*l.* 9s.; merchants' bills, 203*l.* 0s. 8d.; discount allowed on calls, 15*l.* 3s. = 989*l.* 13s. 1d.—Arrears of call, 637*l.*: leaving debit balance, 352*l.* 13s. 1d. The report of Capt. James Wolferstan stated that they hoped to cut the lode in the cross-cut north in the 32 in about a fortnight, but they could not be certain, as the underlie might vary considerably in a depth of 30 fms. That lode presented very good indications in the back near the surface, and they hoped to find it productive when intersected in the 32 fm. level.

At New Treleigh Mine meeting, on Thursday (Mr. Carr in the chair), the accounts showed a balance of liabilities over assets of 6*l.* 17s. 8d. No call was made. The committee were re-elected. Details in another column.

At the Wheal Cupid meeting, on Monday (Mr. E. Boyle in the chair), the accounts showed a debit balance of 469*l.* 7s. 11d. A call of 3s. per share was made. The committee were re-elected. The agent's report, which was read, appears in another column. The levels driving eastward were now going into the parallel ground in which North Grambler and Grambler were opening up their deposits of ore. Capt. R. Pryor saw no reason to alter his opinion as to the success of the mine.

At East Trefusis Mine meeting, on Wednesday, a call of 10s. per share was made.

At Boscaswell Mines meeting, the accounts for the three months ending March showed,—Balance last audit, 3*l.*; tin sold, 1604*l.* 17s. 8d. = 1607*l.* 17s. 8d.—Mine cost, merchants' bills, and sundries, 1602*l.* 6s. 7d.: leaving credit balance, 5*l.* 11s. 1d. Capt. W. Noy reported that having during the past quarter overcome the difficulties in the eastern part of the mines by clearing Whitwell's shaft, and having fixed and secured the pitwork to the 110, so as to enable them immediately to reach the deeper levels, they may confidently anticipate that during this summer the drainage will be rapidly proceeded with. Machinery all in good order.

At Great Brigan Mine meeting, on Thursday (Mr. George Scamell in the chair), the accounts for the three months ending April showed—Balance last audit, 2611*l.* 14s. 9d.; mine cost, 4193*l.* 14s. 8d.; F. Pryor, 16*l.* 16s.; club, 2*l.* 4s. 9d. = 6824*l.* 10s. 2d.—Calls received, 2500*l.*; F. Pryor, 6*l.*; carriage, 12*l.* 15s. 9d.: leaving debit balance, 4305*l.* 14s. 5d. A call of 17s. per share was made. Capts. Trelease and Crase reported that when the mine is drained and properly laid open it will not prove a lasting and profitable mine.

At Ashburton United Mines meeting (Mr. G. S. Bryant in the chair), the accounts showed,—Mine cost, merchants' bills, and sundries, 2067*l.* 18s. 11d.; balance last audit, 301*l.* 9s. 1d.; tin ores sold, 1238*l.* 1s. 9d.; discounts, 22*l.* 4s. 2d.: leaving debit balance, 506*l.* 3s. 11d. Owing to want of water, and the temporary deprival of Bag Tor water, the tin estimated at last meeting to be sold has been delayed. It is expected that it will be ready in about ten days, and that it will realise 1400*l.* Capt. W. Edwards reported upon the various points of operation. They have 160 hands employed, and calculate on raising in the three months ending September about 30 tons of tin, and the cost for the same period, including new machinery and works appertaining thereto, will be about 600*l.* per month. It was resolved that "the assignment of the East Birch Tor leases, and the agreement for rent of water-leat with the Smiths' Wood Mining Company, to Messrs. Bryant, Godwin, and Sayce, in trust for this company, be confirmed; and that this company indemnify those gentlemen against all liabilities, if any, in respect thereof."

At the South Dolcoath and Carnarthen Consols meeting the accounts showed a debit balance of 157*l.* A call of 2s. per share was made.

At Trencrom Mine meeting, on June 5, the accounts for the three months ending April showed,—Mine cost, 1113*l.* 8s.; merchants' bills, 435*l.* 15s. = 1549*l.* 3s.—Balance last audit, 24*l.* 0s. 8d.; tin ore sold (deducting 43*l.* 0s. 6d. dues at 1-20th), 817*l.* 9s. 7d.: leaving debit balance, 707*l.* 12s. 9d. A call of 15s. per share was made. Capts. R. Hollow and F. Bennetts, after reporting upon the various points of operation, state that they have on tutwork 34 men, and on tribute 39, and that they have fair prospects for future success. Capt. Thomas Richards was appointed manager and purser, at 6*l.* 6s. per month.

At North Frances Mine meeting the balance of liabilities over assets was 203*l.* A call of 10s. per share was made.

At Condurrow Mine meeting the accounts showed a balance against the adventurers of about 2000*l.* Some dissatisfaction was manifested about the slow development of the mine, especially in sinking the engine-shaft, and it was resolved that the meeting be adjourned until the 27th inst., and that in the mean time Capts. Pope and Bawden be appointed to inspect the mine.

At East Providence Mine meeting a call of 2s. per share was made.

At Worvas Downs Mine meeting, on Tuesday, a call of 15s. per share was made.

At the Gawton Copper Mine meeting, on Wednesday (Mr. J. E. Mathew in the chair), the accounts showed—Balance last audit, 19*l.* 17s. 5d.; Jan. mine cost, merchants' bills, &c., 145*l.* 12s. 2d.; February, 143*l.* 19s.; March, 161*l.* 4s. 3d.; April, 185*l.* 18s. 6d. = 656*l.* 11s. 4d.—Call, 200*l.*; copper ore sold, 338*l.* 7s. 9d.; mundic, 40*l.* 9s.; received for crushing ore, 2*l.* 12s. 6d.: leaving debit balance, 75*l.* 2s. 1d. The arrears of call amounted to 44*l.* 4s. A call of 2s. per share was made. The committee were re-elected. A resolution was passed forfeiting all shares in arrear of call. The agent's report appears in another column.

At the Tavy Consols Mine meeting, yesterday (Dr. H. Nelson in the chair), the accounts showed a balance of liabilities over assets of 242*l.* 10s. 10d. The report of the agent (Capt. Joseph Richards) stated that the improvement in the 56 was of great importance, inasmuch as independent of the value of the discovery itself, which might fairly be estimated as being worth 3 tons of good quality ore per fathom, there were other points of equal promise in the mine. They had on the mine about 40 tons of copper ore and 20 tons of arsenic. The Chairman said there could be no doubt that their affairs had of late been in a most unsatisfactory position; but at the same time the whole of their difficulties had arisen from certain of the shareholders not responding to the calls. As far as regarded the actual position of the mine itself, there could be no doubt their prospects were now more encouraging than they had been since the formation of the present company. Mr. Rhodes complained that a general meeting had not been held for six months, which was contrary to the rules of the company. The Secretary explained that that irregularity had been occasioned by the proceedings in the Stanuary Court. Mr. Sharp wished to know how it was that the shares which were forfeited some time since had not been sold by public auction, and so assist in defraying the expenses of the mine? The Secretary replied that the matter had been recently discussed by the committee, the result of which was that he had received instructions to dispose of them. The Chairman said the fact was the mine was sold a few days since, and a deposit had been paid to the extent of 25 per cent. There was a sum of 264*l.* to be paid to-morrow, and unless it were paid their prospects, so far as the present company were concerned, would vanish. After some further discussion a call of 2s. 6d. per share was made, and it was agreed that Capt. Charles Thomas, of Dolcoath, be requested to examine the mine on behalf of the shareholders, and report generally upon the management and prospects of the mine. Messrs. A. Giles, J. Jones, H. Nelson, J. Rhodes, — Stewart, and E. W. Yarrow were appointed the committee of management till the next general meeting.

At the Great Wheal Vor United Mines meeting, to be held on Wednesday, the following statement of accounts will be presented:—Cash account, April 30: Balance last audit, 3096*l.* 16s. 1d.; calls received, 243*l.* 14s.; tin sold, March and April, 3916*l.* 5s. 5d.; received for sale of plant and sundries, 620*l.* 19s. 7d. = 7877*l.* 15s. 1d.—Mine cost, Jan., Feb., and March, 2474*l.* 18s. 8d.; merchants' bills, 828*l.* 16s. 9d.; Mr. Trelawny for lease of sett, 15*l.* 15s.; dues, 11*l.* 9s.; repaid solicitor on account of law charges on shares in Stannaries' Court, 4*l.* 10s.; repaid auctioneer's lot-money on sale of plant, 17*l.* 1s. 9d.; dividend declared March, 1477*l.*; London expenses, 168*l.* 0s. 6d.; sundries, 20*l.* 13s. 6d.: leaving credit balance, 2859*l.* 9s. 11d. (359 shares sold Oct. 25, per decree of Stannaries' Court, left a loss on call due of 38*l.* 0s. 9d., which amount, not having been received, does not appear on either side of the above statement.) A supplemental account, showing the financial state and all the known liabilities on June 7:—Balance, as per audited account, April 30, 2859*l.* 9s. 11d.; tin sale, May, 1374*l.* 6s. 10d.; received for calls on shares sold in Stannaries' Court, 76*l.* 10s.; received since April 30 for sale of plant, 10*l.* 16s. 3d.; sundries, 3*l.* 3s. = 4324*l.* 6s. Mine cost, April, 884*l.* 14s. 6d.; merchants' bills, 294*l.* 8s.; balance of March ditto, 15*l.* 2s. 2d.; dues, 209*l.* 12s. 6d.; sundries, 5s. 1d.: leaving credit balance (cash and bills receivable), 2920*l.* 3s. 9d. The assets exceed the liabilities by 2856*l.* 9s. The three large engines (not included in the above assets) are yet unsold. The profit and loss account for the three months ending March showed a nett profit of 188*l.* 15s. 2d. During the quarter there were nearly 38 fms. sunk and driven.

At the Western Africa Malachite Company meeting, on May 31 (Mr. Henry Wrench in the chair), the accounts showed—Capital subscribed, 110,000*l.*; malachite sold, 4179*l.* 15s. 11d.; liabilities, 1118*l.* 4s. 8d. = 115,298*l.* 0s. 7d.—Purchase of mines and cost to December, 1859, for working, 107,543*l.* 2s. 2d.; London expenses and sundries, 910*l.* 18s. 5d.; mine cost, 5717*l.* 0s. 5d.; assets, 701*l.* 6s. 2d.; cash in hand, 425*l.* 13s. 5d. = 115,298*l.* 0s. 7s. The directors presented an elaborate report of a most discouraging character. The company have lost the services, through the insurrection of the blacks in the Bembe district, of Mr. J. B. d'Andrade, who was ordered to command the Portuguese expedition against them. Mr. V. do O' has been appointed in his stead, and the directors hope that during the present dry season their works will be pushed on with vigour, and with good success. Mr. do O' has engaged to construct fortresses along the road from the mines to the coast at a cost of about 100*l.* each, and to establish, at the company's expense, a colony of carriers at Quiballa, and Mr. Andrade suggests that the company may obtain, through the influence of the Portuguese Government, a sufficient number of carpenters, smiths, and other artizans from among the convicts, whom they send as soldiers to the colony of Angola, and this the directors deem the best mode of overcoming their chief difficulty.

At the East India Coal Company (adjourned general) meeting, on Thursday (Mr. H. Haymen in the chair), it was stated by the Chairman that the last meeting was adjourned till this day, in order that a letter might be forwarded to Mr. Harrison, requesting him to attend the present meeting, in reply to which request a letter had been received from Mr. Harrison, to the effect that the present state of his health precluded him from attending upon that occasion, but that he would be glad to afford any explanation in his power, either as to the accounts or as to the position and prospects of the company; at the same time reminding the board that it was now more than 12 months since he had had the management of the company's affairs. The best evidence that could be adduced of the opinion which was entertained of the undertaking in India was the fact that those who were among its greatest enemies some time since were now among its largest proprietors. The board could not make any proposition with reference to that letter, but at the same time they would be glad to hear any remarks from proprietors. He concluded by moving that the meeting be again adjourned, to give time to receive the account sent out for further verification by the last mail. In answer to questions, the Chairman replied that the profit and loss account sent home by Mr. Boyle showed a profit upon the year's operations of something like 47,000 rupees, but the official accountants at home were of opinion, from those accounts, that the operations had resulted in a loss to the company. The whole matter, however, admits of an explanation. The meeting was then adjourned.

At the Labuan Coal Company meeting, on Wednesday (Sir James D. Elphinstone in the chair), the balance-sheet, made up to end of Dec., showed a balance at bankers of 2997*l.*, and a statement of receipts and disbursements of cash made up to May showed a balance at bankers of 3779*l.* 7s. 4d. It will be seen by the details, which appear in another column, that the prospects of this undertaking are most encouraging, possessing, as it does, an exclusive right to the whole of the coal in the island of Labuan, and which right extends to about 180 miles on the opposite coast of Borneo. Mr. T. Smith, of Ettingshall Colliery, Bilston, whose report upon the mine, the result of personal inspection, has already been submitted to the shareholders, attended and confirmed his opinion as to the nature and extent of the property, stating that there were, at least, 1,000,000 tons of the best description of coal already in view, which could be raised at a small cost. An important addition was made to the board in the person of Mr. Periera, of the China firm of Dent and Co.

At the South Australian (Burra Burra) Mining Association meeting, at Adelaide, on April 17 (Mr. A. Blyth, M.P., in the chair), the accounts showed that the cost of producing 7243 tons of ore amounted to 78,135*l.* 14s. 5d., or 10*l.* 15s. 9d. per ton. The gross proceeds of the said ore amounted to 96,154*l.* 11s. 10d., or 13*l.* 15s. 6d. per ton, and the nett profit to 18,018*l.* 17s. 5d., or 2*l.* 9s. 9d. per ton, being a considerable improvement upon the two half-years preceding the one now under review, and leaving a much larger amount of profit than was anticipated by the directors when they made their last report. The forty-third and forty-fourth dividends, amounting to 24,640*l.* paid in November and February last, have been debited to the profit and loss account, as also the sum of 833*l.* 7s. 5d., the loss incurred in working and exploring the mineral claims at Mount M'Kinlay; and the balance remaining to the credit of that account on the transactions of the association to March, 1860, is 17,799*l.* 9s. 11d., from which the directors declared a dividend of 100 per cent. on the capital stock (or 5*l.* per share, payable on June 1, and, with the assistance of the profits accruing during the current half-year, they hope to pay a similar dividend in September. It is estimated that after all liabilities have been provided for there will remain a gross undivided profit of 42,076*l.* 11s. 11d.

At the Kapunda (S. A.) Mining Company meeting, to be held on Monday, the accounts will show that the total expenditure of the company during 1860 was 45,718*l.* 19s. 10d., and the average cost per ton of copper delivered at the shipping port was 65*l.* 16s. The working account shows that the profit for the year, upon a fair estimate of the copper ores and copper remaining unrealised on December 31, amounted to 16,096*l.* 4s. 11d., in respect of which the directors will recommend the payment of a first dividend upon the nominal paid-up capital of 2s. per share (free of income tax). The total quantity of copper ore raised was 3153 tons, of 22 per cent. average produce, and containing, therefore, nearly 694 tons of pure copper. The copper made was 641 tons, and the copper shipped to this country was 642 tons. With respect to the prospects for the future, the directors have every reason to consider them very promising. The yield of ore during the past year was good, and the advices from the manager lead them to believe that it will continue to be well maintained, the more so as late accounts report that in the deepest levels (at 60 fms.) a large lode, supposed to be the main lode, had been cut, and which contained rich ore.

At the Lusitanian Mine meeting, on June 5, the accounts showed a profit on the 12 months' working of 2142*l.* 9s. 9d., *not* 214*l.* 0s. 2d., as *erroneously* stated in our last.

The Seend Iron Company commences operations on July 1. The share list is announced to be closed on the 22d inst. The last quotation at the close of the Stock Exchange was ⅛ to ⅜ prem.

LEEDS, JUNE 13.—A moderate amount of business has been transacted, and enquiries for Mining Shares have been more numerous: altogether, greater activity has prevailed of late.—Craven Moor, 3s. to 4s.; Hebden Moor, 15s. to 20s.; North Hallenbeagle, 30s. to 40s.; Wensleydale, 7s. 6d. to 8s. 6d.; Wet Groves, 6*l.* to 10*l.*—JOHN GLEDHILL AND CO.

At the COAL MARKET, on Monday, 64 arrivals. The market for house coals was not quite so active as on Friday, but a fair amount of business was done at previous prices for all descriptions. Best house coals, 18s. 6d. to 19s.; seconds, 16s. to 17s.; Hartley's, 14s. 6d. to 15s. 6d.; manufacturers' 13s. to 14s. 6d.—Wednesday: Only 25 fresh ships having reached, the tone of the market for house coal was firmer, and a ready clearance effected, without alteration in value. Hartley's and manufacturers' steady, and without change in prices.—Friday: 36 arrivals. The tone of the market for house coals was rather dull, but the little business done was at last day's prices. Hartley's and manufacturers' more enquired after, at previous quotations. Hetton Wallsend, 19s.; South Hetton Wallsend, 18s. 9d.; Haswell Wallsend, 18s. 3d.; Hartlepool Wallsend, 18s. 3d.; Harton Wallsend, 16s. 9d.; Hetton Lyons Wallsend, 16s. 9d.; Hartley's, 14s. 6d. to 15s. 6d.; and Tanfield, 13s. per ton.—10 cargoes unsold; and 90 ships at sea.

The following are the quantities of seaborne coal, culm, and cinders, imported into London during May from the undermentioned ports:—

Ships.	Ports.	Tons.
240	Newcastle	90,263
66	Seaham	15,874
181	Sunderland	74,081
14	Middlesbro'	2,997
206	Hartlepool and West Hartlepool	58,248
4	Blyth	606
8	Scotch	1,750
53	Welsh	18,892
16	Yorkshire, &c.	1,710
2	Duff	559
5	Small	1,815
11	Cinders	1,558
4	Culm	886
810	Total imported in May, 1861	269,239
	Total imported in May, 1860	278,879

Comparative statement of coals and coke imported in 1860 and 1861:—

	Ships.	Tons.
Imported from Jan. 1 to May 31, 1860	4811	1,543,887
Imported from Jan. 1 to May 31, 1861	4388	466,657
Decrease in the present year	423	77,230

WHITE LEAD DIRECT FROM THE ORE.—Mr. T. Cobley, of Meerholz, proposes first to grind and pulverise the ore, and then oxidise it in an ordinary furnace; after oxidation he treats it with acetic acid, or acetous gases, to form a saturated acetate salt of lead; this liquid salt is gently heated, and impregnated with heated carbonic acid, when the white lead deposits itself, and being washed, pressed, and dried is ready for use. Mr. John Arthur Phillips (Phillips and Darlington) also claims an invention for a similar object, which, however, has the advantage over Mr. Cobley's, that a better quality of white lead is produced at a cheaper rate. We shall take an early opportunity to describe this invention in detail.

MANUFACTURE OF SPELTER.—An invention, which consists of certain modes of utilising the sulphur contained in the sulphuret of zinc, has been patented by Mr. Chas. Crockford, of the Greenfield Spelter-works, Holywell. For this purpose he proposes to introduce the pulverised sulphurets into flat retorts or ovens heated by fires passing over and under them, or otherwise; and the mineral is kept continually stirred by means of a series of rakes travelling backwards and forwards in the said retorts, which rakes are supported upon a machine very similar to a spinning-mule, which is kept in motion by machinery, and by this means fresh surfaces of the mineral are continually exposed to the action of the air, which is admitted at the mouth of the retorts, and which being converted into sulphurous acid in its passage through them is conducted into a leaden chamber, and there converted into sulphuric acid in the usual manner. Sometimes he prefers heating the air before admitting it into the retorts, but this is not absolutely necessary. Another mode which he adopts is to mix the pulverised sulphuret with a small quantity of clay or other plastic material, and mould it into small bricks or balls, which, after being dried, are burnt in kilns or ovens connected with a leaden chamber, the said kilns being heated externally by fire; or he burns with the said balls or bricks a certain proportion of pyites, the combustion of which generates sufficient heat for the desulphurising of the sulphuret of zinc, without the necessity of heating the kilns externally.

PREPARING PEAT FOR FUEL.—Some improvements upon his patent of 1848 have just been secured by Mr. Jasper W. Rogers, of Robertstown, Kildare. The whole space upon which it is proposed to operate at one time must be isolated and cut off from all other parts of the bog, so that no moisture from the surrounding peat can reach that which is intended to be drained. The drains are cut so that steps may be formed from the surface to the lowest point, where there is a narrow channel to carry off the water; the mass thus becomes firmly consolidated. To avoid delay the peat is cut with a peculiar winged spade, which leaves it in sods about 12 by 3 in. These are placed in wicker frames, and dried by rotation.

"CORNISH NOTES."—The first edition of the "Notes made during a recent Tour in Cornwall and Devon," by Mr. J. Y. Watson, F.G.S., having been sold, a second edition, revised by the Author, has been printed, and copies, 1s. each, can be had of Messrs. Watson and Cuell, St. Michael's-alley, Cornhill, or at the *Mining Journal* office, 26, Fleet-street, London.

*** We shall publish a SUPPLEMENTAL SHEET next week, which will contain an elaborate paper on the different methods of Working Coal, or "Long Wall" *versus* "Pillar" Working, having especial reference to Mr. Bassett's paper, read before the South Wales Mining Institute—Lead Mining in Yorkshire—the Iron Produce of the World.

LEAD ORES.

Sold on the 10th June.

Mines.	Tons.	Price per ton.	Purchasers.
East Logylas	84	£11 14 0	Walker, Parker, & Co.
Cwmystwith	60	11 18 6	ditto
ditto	60	11 16 6	ditto
Bronfloyd	20	14 10 0	Stork and Co.
Sold at Holywell on the 13th June.			
Maesyrerwddu	41⅛	13 2 6	Walker, Parker, & Co.
Coetia Llys	48	13 0 6	ditto
Deep Level	25	11 18 6	ditto
Holywell Level	5	13 1 0	Adam Eyton.
ditto	5	14 1 6	Walker, Parker, & Co.
Brynford Hall	18	12 16 0	ditto
Herward United	30	11 8 6	A. Courage and Co.
Speedwell	6	11 10 6	ditto
Rhosesmor	54	12 1 0	Adam Eyton.
Orsedd	6	12 10 0	ditto
Ty-Maen	20	13 3 0	Walker, Parker, & Co.
Bryn Gwiog	25	11 19 0	ditto
Parys Mine	38	12 1 0	ditto
Grosvenor	8	12 5 0	Adam Eyton.
Dyliffe	37	11 13 0	Newton, Keates, & Co.
Aberdovey	20⅛	12 0 0	Adam Eyton.
Caeconroy	4	10 10 0	Walker, Parker, & Co.
Pyllancochion	13	11 17 6	ditto

BLACK TIN.

Sold on the 5th June.

Mines.	Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
Wheal Union	2 18 2 26	£70 0 0	£ 205 11	3—Trethellan.
Sold on the 7th June.				
Gurlyn	2 11 3 3	70 0 0	181 4	4—Mellanear.
Sold on the 8th June.				
Great Wh. Vor	17 11 3 9	—	1278 4	9— —
Pedn-an-dreaUnit.	9 1 1 8	—	622 4	3—Carvedras, &c.
Sold on the 11th June.				
Bottle Hill	4 10 0 0	70 15 0	345 7	6—Charlestown.

COPPER ORES.

Sampled May 29, and sold at Tabb's Hotel, Redruth, June 13.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Basset	86	£4 15 6	Pendeen Consols	10	£23 14 0
ditto	77	4 0 6	United Mines	70	2 12 0
ditto	70	5 5 6	ditto	55	4 2 6
ditto	67	5 3 0	ditto	48	1 17 6
ditto	52	7 11 6	Great South Tolgus	50	6 2 6
ditto	42	4 11 0	ditto	46	9 1 6
ditto	40	10 18 0	ditto	43	5 17 0
ditto	32	3 19 6	ditto	32	8 8 6
ditto	31	4 8 6	Rosewarne United	63	10 13 6
ditto	13	3 17 6	ditto	62	7 10 6
Carn Brea	129	0 2 6	ditto	33	4 13 6
ditto	61	2 11 6	Treloweth	52	6 10 0
ditto	60	2 11 0	ditto	35	9 8 0
ditto	57	3 19 6	ditto	33	4 14 0
ditto	53	1 16 0	ditto	12	19 15 6
ditto	40	3 9 0	Charlotte United	44	7 9 6
ditto	38	6 10 0	ditto	41	5 6 6
ditto	37	4 12 6	ditto	36	8 2 6
ditto	29	7 18 6	Wheal Buller	85	5 11 0
Par Consols	75	7 10 0	ditto	31	15 1 6
ditto	73	10 8 0	Copper Hill	49	2 8 6
ditto	64	7 10 0	ditto	40	6 19 6
ditto	57	9 19 0	Wheal Unity Consols	37	6 16 6
ditto	50	2 4 6	ditto	28	3 3 6
ditto	31	4 9 6	ditto	16	13 3 6
ditto	1	24 17 6	Cook's Kitchen	39	1 1 0
Great Wheal Alfred	78	3 2 0	ditto	31	1 2 6
ditto	76	4 2 0	East Carn Brea	63	6 6 0
ditto	48	4 0 6	West Fowey Consols	50	9 4 6
ditto	47	4 11 0	Treworlis	23	3 0 0
ditto	45	7 2 6	ditto	17	5 17 6
ditto	23	1 16 0	ditto	4	4 15 6
Pendeen Consols	98	3 0 0	Great Work	14	7 0 0
ditto	92	2 12 6	ditto	1	40 0 0
ditto	64	3 0 0	Trebarvah	9	2 11 0
ditto	46	3 16 6	North Great Work	6	7 5 0

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
West Basset	510	£2770 12 6	Wheal Buller	116	£939 1 6
Carn Brea	504	1434 3 6	Copper Hill	89	397 16 6
Par Consols	351	2643 14 0	Wheal Unity	81	552 4 6
Great Alfred	317	1322 9 6	Cook's Kitchen	70	75 16 6
Pendeen Consols	310	1140 9 0	East Carn Brea	63	396 18 0
United Mines	173	498 17 6	West Fowey Consols	50	461 5 0
Great South Tolgus	171	1244 17 0	Treworlis	44	187 19 6
Rosewarne United	158	1293 7 0	Great Work	15	138 0 0
Treloweth	132	1059 8 0	Trebarvah	9	22 19 0
Charlotte United	121	839 14 6	North Great Work	6	43 10 0

Average Standard .... £126 16 0 | Average Produce 6⅜
Average Price per ton £5 6 0
Quantity of Ore .... 3290 tons | Quantity of Fine Copper, 209 tons 2 cwts.
Amount of Money £17,463 2 0

LAST SALE.—Average Standard .... £132 3 0.—Average Produce 5⅞
Standard of corresponding sale last month, £134 19 0.—Produce, 6⅝.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal Company	97⅔	£ 348 2 2
Vivian and Sons	216½	532 4 9
Freeman and Co.	192⅓	757 8 3
Grenfell and Sons	435⅔	3073 6 11
Crown Copper Company	55⅔	292 19 8
Sims, Willyams, and Co.	227⅓	1491 7 10
Williams, Foster, and Co.	368 5-6	2340 17 10
Mason and Elkington	464⅔	2551 17 1
F. Bankart	331⅛	2573 10 0
Copper Miners' Company	265⅙	1814 15 7
Charles Lambert	265	691 13 9
Newton, Keates, and Co.	70⅔	298 3 2
Sweetland and Co.	299	766 15 0
Total	3290	£17,463 2 0

Copper ores for sale on Thursday next, at the Royal Hotel, Truro.—Mines and parcels.—Devon Great Consols 1789—Wheal Crelake 390—Phœnix Mine 368—Marke Valley 306—West Caradon 300—Wheal Edward 271—East Caradon 209—Great Wheal Martha 207—Bedford United 200—Wheal Emma 192—Devon and Cornwall 170—Gunnis Lake and Clitters 165—North Wheal Robert 155—Wheal Friendship 153—Wheal Yarner 104—Kelly Bray 100—Sortridge Consols 58—Cuddra 30—Torpoint Ore 29—Devon and Courtenay 24—Wheal Crowndale 19—Brook Wood 19—Total, 5258 tons.

Copper ores for sale on Thursday week, at Tabb's Hotel, Redruth.—Mines and parcels.—Fowey Consols 464—Great Wheal Busy 457—United Mines 456—South Caradon 420—West Damsal 353—South Crinnis 160—Wheal Polmear 127—Gonamena 101—Craddock Moor 85—Wheal Mary Great Consols 71—Prideaux Wood 56—Grambler and St. Aubyn 41—East Tolgus 32—Creegbrawse 20—Wheal Damsel 9.—Total, 2852 tons.

SECOND SALE IN JUNE.

Years.	Tons.	Prod.	Amount.	Standard.	Ore copper.	Cake cop.
1851	3594	8	£19,145 16 0	£104 1 0	£66 5 0	£84 0
1852	3222	8	21,270 10 0	117 10 0	82 19 0	93 0
1853	3432	7	20,572 8 0	124 4 0	85 2 0	107 10
1854	4573	7⅛	32,560 16 6	139 8 0	100 11 0	126 0
1855	4788	7⅛	34,756 7 6	140 9 0	101 18 0	126 0
1856	5243	6⅝	30,211 6 6	129 14 0	87 10 0	126 0
1857	4619	6⅝	27,962 10 0	129 8 0	89 0 0	117 0
1858	4461	6⅛	24,879 7 0	128 17 0	86 6 0	107 10
1859	4295	6¼	21,376 13 6	124 12 0	80 5 0	107 10
1860	4290	6⅜	22,470 11 0	124 8 0	81 11 0	102 10

The copper in the ore expresses the nett price per ton of copper paid to the miner

Copper ores for sale June 18.—Berehaven 110, 97, 107, 100, 112, 102, 86—Cobre 100, 80, 76, 101, 82, 70—Cuba Ore 94, 86, 78, 68; Precipitate 10, 9, 10, 4—Knockmahon 106, 33, 112, 46—Australian Ore 57, 56, 52, 37, 30—Gellyreath 17—Wallaroo 58, 44—Del Soto 54, 41, 1—Union Precipitate 21, 21, 20—Appeanilia 22, 10, 8, 1—Turkish Ore 8—Australian Regulus 5.—Total, 2442 tons.

Notices to Correspondents.

*** Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

THE COST-BOOK SYSTEM.—I shall feel obliged by your informing me, in next week's Journal, whether "relinquishment of cost-book mining shares, reserving the right to proportion of materials, &c., on the mine," exonerates the holder from future liability in regard to claims against the company, or claims of the company against him in regard of calls, as effectually as "absolute relinquishment" of same, and if so why should the latter ever be preferred? It would, I presume, be competent for a holder of a number of shares to relinquish part without relinquishing the whole, and thereby exonerate himself from liability to calls in respect of them, supposing them not to be marketable?—AUGUSTUS JOHNSTON: *Hawkshead, Ambleside, Lancashire.*

[It is a well-settled principle of the Cost-book System that an adventurer may relinquish, or, in Cornish phrase, "write off," his shares, *or any of them*, the effect of which is that such adventurer is out of the adventure, quoad the shares written off; and he on the one hand is entitled to the value of the materials, &c., proportionate with the number of shares so written off, and on the other is discharged from all further responsibilities and liabilities of the mine in respect of such shares. The above is the common law exposition of the principle of cost-book relinquishment, a principle which is generally modified by the rules and regulations of each adventure. Thus, the common law principle is often modified to this extent—viz., that an adventurer is not on relinquishment entitled to be paid his share of the value of the materials, &c., and a very reasonable modification it is, because, in order that an adventurer may know what he has to receive the materials, &c., have to be valued by the company, which in an extensive cost-book mine is not only a troublesome but a expensive business, so that in modern times it is thought reasonable that, if an adventurer determines to secede from his co-adventurers by relinquishment, he ought to throw his share of the value of the materials, &c., into the common fund, and this is why an absolute relinquishment is generally required. Further information as to the history and extent of this principle, &c., may be found in "Tapping's Cost-book Essay," page 28, and Fenn's case, in page 168 of the same work, which will well repay perusal.—ED. *M. J.*]

IRON AND IRON MAKING.—In transferring an article on "Iron and Iron Making" from the *Engineer* to your Journal last week, you have stated that "large lumps of cast-iron remained," &c. This is incorrect. Properly worked, it is simply impossible that lumps of cast-iron could remain in the churn unmelted, as all goes in together, and the puddling process does not commence till the whole charge is in a fluid state. As well could the fruit we see in jelly have gone through the process of jelly making as that lumps of cast-iron could be in the balls. We found out that one man made a wager to produce a greater yield than the other, and to accomplish his object threw in lumps of crude iron, and lapped them up in his balls. Some of my puddled iron has been made into tubes, a test good enough to convince the sceptical and believers in the continuance of the integrity of the puddler's hook.—W. H. TOOTH.

BOG IRON ORE.—I should be glad if some of your numerous correspondents would inform me, through the columns of the Journal, the uses to which bog iron ore is applied, and its present market price.—ENQUIRER.

CARN VIVIAN.—I find that a circular has been sent to the shareholders of this mine, postponing the meeting that was to have been held on the 3d inst. to the 20th, "owing to the auditors not having yet received the books from Mr. Morshead." This is not the case. The books were given up at the last meeting, on April 17, and the meeting fixed for June 3 was postponed at the express request of Mr. Daniell, one of the auditors, who was prevented by other engagements from auditing them in time. Perhaps at the next meeting the purser will favour the adventurers with a statement of his receipts and expenditure during the six months he has been in office—a matter about which the majority are at present in a state of profound ignorance. He may possibly think that the success of Treveddoe Mine, under his management, ought of itself to be a sufficient guarantee to Carn Vivian shareholders to place the most implicit confidence in him; strangely, however, such does not seem to be the case, for although the mine is at present looking very well, and a call has lately been made sufficient to clear off all liabilities, and provide for several months' working, our shares are a mere drug in the market, which any one who will inspect the mine will see should not be the case. —W. MORSHEAD, Jun.

WHEAL ANNE (St. Austell).—At the last meeting of this company the shares were increased fivefold without any previous notice whatever, and as from present impressions of the cost-book "theory" I regard this as an absolute departure from one of its vital principles, I shall be glad if some competent authority will inform a shareholder how far he is correct in the opinion that it was altogether an illegal act. I have hitherto held the idea that the division or number of shares being once determined on, could not be rescinded, except by special notice and special resolution to that effect. In the present instance, however, all established rules have been ignored, for what purpose, perhaps, the Chairman will enlighten the ignorant.—ONE WHO DID NOT ATTEND THE MEETING: *Liskeard, June* 11.

GREAT RETALLACK.—As your excellent Journal is the only medium through which distant shareholders can give expression to their complaints, I trust you will favour me with a corner for a word about the weekly reports of the captain of Great Retallack, which I think might be much more explicit. On May 18 he writes:—"In the 35 west we are within 5 or 6 ft. of the Peru lode. Immediately west of the Peru lode, in the 30, the great lode is very sparry, with spots of lead in it, and we shall be under this in the course of five or six days." Now, Sir, what I complain of is that neither in his report of May 25 nor in that of the 1st inst. does he say whether the Peru lode has been cut, or the point under the 30 reached. I would also ask why he did not inform us what the reduction was in the tribute bargains, which he says were retaken on May 31? I have one more question to ask, and that is why he writes his reports the day the Journal appears, and not a couple of days before, as many of the agents do, so that the distant shareholders may have the advantage of the *latest* intelligence, instead of, as now, a week old?—A SHAREHOLDER.

COUNTY CORK AS A MINERAL DISTRICT.—I have noticed the several articles under this heading in the Journal, and have also read that highly-instructive work by Mr. Lisabé upon the mineral capabilities of the county. I quite agree with "An Adventurer" in last week's Journal in the wish that the mining public may be aroused to this long-neglected country. For that there are great riches in minerals in every province is an undoubted fact; but how is it that although there are many good mines in the county of Cork, and that must amply repay the proprietors while being worked as private adventures, yet when they are in the hands of public companies, with head office in London, they do no pay, or why should the shares be at a discount? For instance, the Crookhaven shares are quoted in the Journal at 17s. paid, and last price 9s. Can "An Adventurer" explain this apparent mystery connected with a mine in such a good mineral district as the county of Cork? I observe that in general the Irish mine shares are at a high premium when the head office of management is in Dublin; for instance (quoting from the Journal) the Connoree shares, 1*l.* paid, are 41s. last price; the Mining Company of Ireland, 7*l.* paid, are 14*l.* 2s. 6d. last price; the Wicklow Copper, 5*l.* paid, last price 64*l.*; the General Mining Company for Ireland, 4*l.* paid, last price 5*l.* 5s. Such facts as these are strong inducements to not only invest in Irish mines, but to seach and look out for others, which, if equally well managed, will, no doubt, become alike productive to the shareholders.—A MINING SPECULATOR: *Dublin, June* 12.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, JUNE 15, 1861.

The usual annual REPORTS OF THE GOVERNMENT INSPECTORS OF COAL MINES—those relating to the casualties which occurred during 1860—have now been printed, and in a few days will be issued to the public; they show, unhappily, that although the number of separate accidents exhibits a diminution of nearly 5 per cent. as compared with the preceding year, the deaths resulting therefrom has increased to the fearful extent of more than 22 per cent. Upon the whole, however, the reports cannot be regarded as unsatisfactory, there being a general diminution in the number of deaths, with the single exception of those from explosions, and, as to the casualties under this head, it is but just to remark that the difference is attributable to the occurrence of three lamentably destructive explosions in districts usually almost free from this class of accident. With respect to the number of tons of coals raised for each death, we are unable to make the comparison with the preceding year, since the last published statistics of the mineral produce of the kingdom contained certain corrections proving the previously estimated annual yield of coal to have been inaccurate. Taking the amount of coal raised in 1860 at 72,000,000 tons, which we conceive is very nearly the truth, it appears that one death occurred for each 64,924 tons of coals raised. The proportion of deaths from each class of accidents was—From the explosions from fire-damp, one death for each 198,347 tons of coal raised; from falls in the mine, one death for each 185,567 tons raised; from accidents in shafts, one death for each 395,604 tons; from miscellaneous accidents underground, one death for each 590,164 tons; and from accidents at surface, one death for each 1,333,333 tons of coal raised. Again, the reports under consideration show that whilst the average number of lives lost for each one million tons of coal raised during the five years ending 1859 was about 15·5, the number during 1860 was about 15·4, a circumstance which shows that although the exceptional accidents from explosions during the year reported upon necessitates an unfavourable comparison with the preceding year there has been a trifling improvement as compared with former years. We subjoin our usual tabulated statement of the accidents and loss of life during the past two years:

1859.

	Separate Accidents.					Lives lost by Accidents.				
	Explosion of Fire-damp.	Falls of Roof and Coal and Sides of Workings.	In shafts.	Miscellaneous, underground and at surface.	Total.	Explosion of Fire-damp.	Falls of Roof and Coal and Sides of Workings.	In shafts.	Miscellaneous, underground and at surface.	Total.
North Durham, Northumberland, Cumberland district	4	33	14	30	81	8	33	14	30	85
Southern division of Durham	2	39	11	37	89	2	40	11	43	96
North and East Lancashire	8	20	9	18	55	12	21	15	20	68
West Lancashire and North Wales.	11	29	17	10	67	12	29	18	10	69
Yorkshire district	10	23	11	12	56	13	23	14	13	63
Derbyshire, Nottinghamshire, Leicestershire, & Warwickshire	2	17	11	6	36	2	18	13	7	40
North Staff., Cheshire, and Shrop.	7	24	7	8	46	12	24	17	11	64
South Staffordshire and Worcester.	11	87	36	14	148	16	32	37	16	101
Western Division (parts of Monmouth, Gloucester, Glamorgan, Brecon, and Devon)	2	24	7	11	44	3	26	7	11	47
South Wales district	4	46	18	22	90	4	49	19	50	122
Eastern district of Scotland	1	18	14	6	39	1	19	16	7	43
Western district of Scotland	8	24	10	2	44	10	25	10	2	47
Total	70	384	165	176	795	95	399	191	220	905

1860.

North Durham, Northumberland, Cumberland district	2	24	11	31	68	79	24	13	37	153
Southern division of Durham	4	30	10	23	67	26	30	10	23	89
North and East Lancashire	8	26	8	13	55	8	26	11	13	58
West Lancashire and North Wales.	7	38	18	13	76	20	38	18	13	89
Yorkshire district	2	19	7	8	36	14	20	8	8	50
Derbyshire, Nottinghamshire, Leicestershire, & Warwickshire	1	21	7	11	40	3	21	13	13	50
North Staff., Cheshire, and Shrop.	12	21	16	8	57	13	22	23	9	67
South Staffordshire and Worcester.	13	69	40	10	132	15	75	44	10	144
Western Division (parts of Monmouth, Gloucester, Glamorgan, Brecon, and Devon	4	35	8	8	55	147	35	8	8	198
South Wales district	10	55	11	25	101	26	55	12	25	118
Eastern district of Scotland	1	20	7	8	36	1	20	7	8	36
Western district of Scotland	6	21	14	5	46	11	22	15	9	57
Total	70	379	157	163	769	363	388	182	176	1109

In Mr. DUNN'S (North Durham, Northumberland, and Cumberland) district the chief cause of increase in the deaths was the Burradon explosion—the result being that the figures for 1860 are 79, against 8 in the

preceding year. The deaths from miscellaneous accidents also show an increase, being 37 in 1860, against 30 in 1859.

In Mr. ATKINSON'S (Southern division of Durham) district there has been, as we have already noticed, an improvement both as respects separate accidents and deaths resulting. In 1859 there were 89 accidents, causing 96 deaths, whilst in 1860 there were only 67 accidents, causing 89 deaths; and but for the extraordinary calamity at Hetton, in December, the improvement would have been equal to nearly 33 per cent.

In Mr. DICKINSON'S (North and East Lancashire) district the number of separate accidents to persons employed in and about collieries in the year 1860 was 55, which is the same number as in the preceding year. The number of lives lost was 58, which was 10 less than in any preceding year. Shaft accidents show a satisfactory diminution; they have steadily decreased from 28 separate fatal accidents in 1854 (which was the year before preventive measures were enjoined) to 8 in 1860, the number of deaths resulting being 11 only; the principal accident was a crush at meetings killing three persons. Mr. DICKINSON remarks that since 1850 the Acts have, in his district, been vitally enforced, and they have been accompanied by improvements in mining, realising most of the benefits that should reasonably be expected. In ventilation and shaft arrangements, which are the two subjects more especially comprised, something like system has been established, whilst the serious item of falls of coal and roof, the precautions against which have been left to the men's and the managers' judgment have continued much as before.

In Mr. HIGSON'S (West Lancashire and South Wales) district there has, unfortunately, been an increase in the number of separate accidents to the extent of over 13 per cent., and in the number of resulting deaths of nearly 30 per cent. The shaft accidents and miscellaneous accidents remain almost stationary, but the accidents and deaths from falls of coal and roof show a considerable and unsatisfactory increase; there is one fact, however, which may be recorded in extenuation—no single accident has resulted in more than a single death. The number of explosions, as in other districts, has tended materially to render Mr. HIGSON'S report less favourable; in 1859 he had 11 explosions, resulting in 12 deaths; whilst in 1860, although the number of explosions had decreased to 7, the deaths resulting amounted to 20.

In Mr. MORTON'S (Yorkshire) district there was a very satisfactory diminution as compared with the preceding year. In 1859 there were 56 separate accidents, causing 63 deaths; whilst in 1860 there were but 36 separate accidents, from which 50 deaths resulted. In his district there has been a general improvement, and with the exception of the explosions, two or which caused 14 deaths, only two accidents occurred resulting in more than a single death.

In Mr. HEDLEY'S (Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire) district a very considerable increase in the number of shaft and miscellaneous accidents has caused his report to be less satisfactory than the previous one. In his district shaft accidents are still by far too calamitous—7 separate accidents, resulting in no less than 13 deaths.

In Mr. WYNNE'S (North Staffordshire, Cheshire, and Shropshire) district the aggregate number of deaths during the year was almost stationary, the difference amounting to 3 only—67 in 1860, against 64 in the precednig year—the shaft accidents and explosions being the unsatisfactory items in the list. The accidents from falls of stone and roof show a slight diminution.

In Mr. J. P. BAKER'S (South Staffordshire and Worcestershire) district, although the figures show a considerable improvement—nearly 10 per cent. in the separate accidents, and nearly 10 per cent. in the number of deaths—it is apparent that there is still much room for improvement in those branches of the workings upon which the Governmental enactments have but little effect. The accidents from falls of stone and coal were still 69, resulting in 75 deaths; and there were 40 shaft accidents, by which 44 lives were sacrificed.

In Mr. LIONEL BROUGH'S (Monmouth, Gloucester, Glamorgan, Brecon, and Devon) district the fearful explosion at Risca has compelled him to present a report recording a number of deaths higher than that of any other district; yet the report is by no means unsatisfactory. The accidents from falls of stone and coal, casualties in shafts, and miscellaneous causes have in no single instance resulted in more than a single death, and with the exceptoin of the Risca calamity, by which 142 persons lost their lives, there were but three explosions, resulting in 5 deaths.

In Mr. THOS. EVANS'S (South Wales) district the results have been little better than in the preceding year; in shaft and miscellaneous accidents there has been a satisfactory improvement, whilst the accidents and deaths from explosions and falls of stone and coal show a considerable increase. The aggregate result being an increase of separate accidents to the extent of 11, and a diminution in the number of deaths resulting by 3.

In Mr. WILLIAMS'S (Eastern division of Scotland) district the year has passed over most satisfactorily; there has been a diminution of nearly 13 per cent. in the number of deaths, and no single accident, whether from explosions, falls of stone or coal, shaft casualties, or miscellaneous causes, has resulted in more than a single death.

In Mr. ALEXANDER'S (Western division of Scotland) district the result has not been so favourable, there being an increase under every head, with the exception of falls of stone and coal, and even here the decrease has only been from 25 in 1859 to 22 in 1860.

Such is the epitome of the facts contained in the reports for 1860, the last under the old law; and we trust that, before it becomes our duty to comment upon another series of reports, the improvements introduced in the working of the various collieries of the kingdom, in order to comply with the provisions of the Act of Parliament now in force, will have been productive of such a saving of life, that even the most conservative of the coalowners will be ready to admit that Government Inspection is as advantageous to themselves as to their workmen. In future Journals we shall, as usual, publish abstracts of the separate reports.

NEW METHOD OF VENTILATING COLLIERIES.

The opinions respecting the most effective means of ventilating collieries are so numerous and conflicting, that doubtless many have concluded that it matters little what system is employed provided it be carried out in its integrity; it cannot, however, be doubted that there is ample room for improvement in by far too many collieries, and, therefore, any proposition brought forward as an improvement upon existing means of accomplishing that very desirable object will be regarded with attention by all practical men, if it be only to endeavour to obtain a hint worthy of their own adoption. A proposal, which will, no doubt, give rise to much discussion, has just been made, by the specification of an invention emanating from Mr. R. H. Hughes, of Hatton Garden, which, if favourably received, cannot fail to revolutionise all the ideas we at present entertain regarding the question at issue. Indeed, Mr. Hughes considers the ventilation of all mines begins at the wrong end, and that the miner at the extreme end of the working should have the first of the pure air; since if an ample supply of air be provided at the points farthest from the shaft its efforts to regain the surface will effectually purify every other portion of the workings.

The advantages which are claimed for the invention are very numerous; amongst other things, it is affirmed that no air-doors will be required, which will be highly desirable, inasmuch as many accidents take place owing to air-doors not being attended to; that there need be no building in of old workings, and thereby making gasholders to blow up sooner or later, as by the new system the air if let out beyond must pass through these and keep them safe; that *no downcast shaft* is required, which would admit of mines being opened at a much less cost; that there would be no difficulty in providing a register which should show the precise quantity of air which had passed into the mine in any given time, whether a day, a week, or a year previously—the Government Inspector being thus enabled to ascertain whether at any time since his previous inspection the ventilation has been permitted to become defective; and that air may be sent down dry and cool; and when from any exceptional circumstance the mine has become fouled with any gas other than that usually to be guarded against, it may be charged so as to neutralise it. The inventor provides for sending down the air dry and cool, because he finds the greater part of the explosions take place in damp foggy weather.

The object of Mr. Hughes's invention, according to his specification, is to supply fresh air to mines and other places by forcing it thereto and to the various parts thereof by suitable pipes or channels, under pressure, in place of simply providing for its flow into and through the mine or other place to be ventilated, as is the general practice. In carrying out his invention, the air to be supplied is collected in a suitable reservoir, adapted to force air therefrom when required by suitable pipes or conduits to the different parts requiring fresh air; and he prefers for the reservoirs apparatus similar to gasholders of gas-works, having movable upper part or dome, and water, or flexible, or other suitable joints, forming retaining means or packing between such upper parts or dome and the case or frame; such retaining means or packing being adapted to admit of the dome sliding freely, and yet of preventing the escape of air therefrom at such parts. There is also a passage to such dome, adapted to admit fresh air therein when such dome is being moved in one direction, and to close when moved in the opposite direction. And there is another valve passage, adapted to be closed by its valve when motion is given to the dome of the reservoir for the admission of fresh air thereto, and to open in the opposite direction, so that the fresh air collected in the reservoir may be allowed to pass away by such passage when the dome is moved in the direction for that purpose. The upper or moveable part of the reservoir may be lifted by a steam-engine, or other suitable power, and its weight (which may be regulated) may be the means of forcing the air therefrom through the desired channels, or such moveable part may be moved in both directions, by steam-engine or other power. The air may be conducted down the mine and into the various chambers or passages thereof, or to such other place as desired, by pipes or otherwise, with outlets at various places, capable of being closed when not required by taps, valves or taps also adapted to receive connections for flexible or other branches, in order that currents of fresh air may be taken to the channels, galleries, workings, or other places where they are particularly required, and then if desired closed or reduced when the occasion for them has ceased. The fresh air may, when desired, be dried in its passage from the reservoir by passing through channels or chambers heated by a furnace or otherwise. Registering apparatus, such as that applied to gas and other meters, may also be applied to the moving part of the reservoir, which, by indicating the number of motions thereof, will indicate the quantity of air communicated in a given time. Thus may the amount of fresh air supplied to the mine or other place during any period be accurately measured and registered. Means such as herein described will be found useful in sinking shafts, forming tunnels, or other workings, for the purpose of supplying fresh air thereto, or air adapted to neutralise any unpleasant gas arising in a particular locality; and in case of need will be found useful in conveying messages, and even food or water, when an accident may have taken place.

As it is well known that more miners are killed by after-damp than by fire-damp, Mr. Hughes anticipates that, inasmuch as after an explosion the men not dead might go to the outlets of the pipes, and get the fresh air, there would be a diminution of 75 per cent. in the number of deaths from colliery explosions, and the apparatus would not get out of order by an explosion. The tendency of Mr. Hughes's system of ventilation is to disperse, and not collect the gas, and by its use the gas in the coal would be driven in rather than drawn out. The air would always be fresh, as it would go direct from the surface to the man by whom it was to be breathed, and the air-channels could be readily extended as the workings progressed. The holders may be made self-acting, and to work by steam or water. In case of fire in the mine the air-pipes could be used as water-pipes, and the fire thus speedily extinguished. The atmosphere would be rendered much more healthy for the miners to work in, and a supply of fresh air would be always at his command, which could be applied at any required point by means of flexible tubes. The inventor confidently believes that by the means he proposes the ventilation could, with ease and economy, be made so perfect that naked lights might be used with safety; and that the merits of the invention would be particularly manifest in sinking shafts or wells, tunnelling, or for clearing the atmosphere after blasting.

NORTHERN INSTITUTE OF MINING ENGINEERS.

The usual general meeting of the Institute was held at the society's rooms, Newcastle-on-Tyne, on June 6, the President (Mr. NICHOLAS WOOD) in the chair. After the formal business of electing members, the President congratulated the society on the large accession of new members, which might in part be attributed to the approaching meeting of the Institute at Birmingham on July 9, 10, and 11. After stating the various arrangements which had been made by the committee appointed for the purpose, he expressed a hope that as many as possible of the members in the northern district would attend, as the advantage which would accrue from a general meeting of the profession of this nature would be very considerable. The President then stated that he understood a commission would shortly be appointed by the Government to enquire into the state of the Durham University, and considering the connection of the proposed Mining College with that body, the question was one of extreme importance to this Institute. He had observed in the newspaper of that morning that notice of a motion had been given at a meeting of the Town Council of Newcastle by Dr. Headlam; to the effect that an endeavour be made to place on that commission gentlemen of position and ability resident in the district. Another motion of a similar character had been brought before the Town Council on the same day, by Dr. G. Robinson, but was withdrawn until Dr. Headlam's could be brought forward. The President, in alluding to the great loss which the profession generally, and more particularly the Institute, had sustained in the lamented death of their late vice-president, Mr. Thomas J. Taylor, stated that Mr. Taylor had taken an active interest in the proposed meeting at Birmingham; he then proceeded to read the memoir of which notice had been given to the members, and which will appear in the Transactions of the Institute. Mr. Thomas John Taylor was born at Shilbottle, in the county of Northumberland, and having lost his father when young was placed under the guardianship of his uncle, Mr. Hugh Taylor, the present respected Chairman of the Coal Trade. Mr. Taylor studied at Edinburgh University, and whilst evincing a predilection for those branches of scientific pursuit most useful to the mining engineer, he by no means neglected others, but became a good classical scholar and linguist; throughout life he was diligent in compiling scientific and statistical records, and he leaves behind him numerous volumes of manuscript, containing records, calculations, and memoranda on matters connected with the coal trade. He bestowed considerable attention on the history of coal mining, and embodied the result of his research in a treatise on this subject; and on the occasion of the Archeological Society holding their annual meeting in Newcastle, he read a paper on the same subject, which is printed in their Transactions. Although his principal professional practice lay in mining engineering, he also devoted considerable attention to the collateral branches of railway and river engineering, in the latter more especially as directed to the improvement of tidal harbours, on which point he was frequently consulted by the Commissioners of the River Tyne. Mr. Taylor was one of the originators of the Border Counties Railway, which owes much of its success to his exertions as one of its directors. Mr. Taylor was from its formation until his death a vice-president of the Northern Institute of Mining Engineers, and in him they lose not merely a well-wisher, but a valuable and active member of the council of management. He contributed to their Transactions several papers of great value and research. Mr. Taylor was a ripe scholar and good linguist, and well versed in a variety of scientific research; his conduct was distinguished by urbanity of manner, combined with integrity of purpose; he died, after a few hours illness, in the 51st year of his age.

THE MINER'S ASSOCIATION OF CORNWALL AND DEVON.

COUNCIL MEETING.—On Tuesday last a council meeting of the Association was held at the Geological Rooms, Penzance (Mr. CHARLES FOX, the President, in the chair). Reports from the educational secretary and lecturers as to the working of the classes established at the different mining centres of Cornwall were read. These classes have been successfully established at Tywardreath, Lostwithiel, St. Agnes, and St. Just, and instruction given in mineralogy, assaying, and the chemistry of the metals, by Mr. Richard Pearce. The instruction given by this gentleman has been fully valued by the agents and miners who have attended those classes, and from the testimony of the Rev. J. J. Treffry, the Chairman of the Tywardreath class, who fully approves of the course adopted by Mr. Pearce in carrying out one of the important objects contemplated by Mr. Robert Hunt, F.R.S., the founder of the Association, the results of his teaching appear to have been very successful. Mr. Treffry being a gentleman of considerable property in Cornwall, and interested very largely in most of the principal mines in the St. Austell and Tywardreath districts, has shown a great interest in the education of the working classes connected with the development of the mineral wealth of Cornwall.

Mr. Charles Twite, of the Government School of Mines, and the lecturer of the Association, has been giving instruction to other classes established at Redruth, Camborne, and Marazian, in theoretical and applied mechanics and mechanical drawing. These classes, from the testimony of gentlemen present at the meeting, appear to have been equally successful. No other evidence of their value and interest need be shown than the application from most of the classes for the continuation of the services of the lecturer, as well as applications from other mining districts where no classes have yet received instruction in the above subjects. The local council for the western district was increased by the addition of the following gentlemen:—Messrs. E. H. Rodd, Richard Pearce, Samuel Higgs, and several mine agents of St. Just and Lelant.

Mr. R. H. PIKE, the treasurer of the Association, stated that the receipts up to the present time are about 200*l.*, and the expenditure about 150*l.*

Mr. ALMOND E. PAULL, the acting secretary, stated that the additional fund promised for the present year is about 60*l.* or 70*l.* Next year this will be considerably increased; in consequence of many of the subscribers to the Mining School at Truro, which will discontinue its operations at Michaelmas next, having promised after that period to give to the Miner's Association, its fund will be considerably increased. The subscriptions are at present derived from about 300 members. It will require that extra efforts should be made for getting additional subscriptions for the present year, as the expense of getting the necessary apparatus, books, &c., for the successful working of the several classes already and to be established, will be attended during the current year with considerable expense.

QUARTERLY MEETING.—Immediately after the council meeting, the first quarterly meeting of the Association was held. The chair was occupied by the President. This gentleman explained the reason of the absence of Mr. Robert W. Fox, F.R.S., Dr. Barham, and Mr. J. S. Enys; and the secretary read letters from Mr. Frederick Hill, Captain Charles Thomas, Mr. James Sims, Mr. John Hocking, engineers, and other gentlemen, explaining the reason of their absence.

The PRESIDENT, in his able address, called attention to the great objects contemplated by the Miner's Association, to its benefits as a scientific and practically useful institution, which would benefit the mining engineer and manager, the mine agent, and the miner—in fact, all who are interested in the development of the mineral wealth of Cornwall, if it receive the support and assistance of those engaged in mining pursuits, as those gentlemen who had contributed the papers at that meeting. He spoke of the great good which would be effected by the successful instruction of the lecturers of the Association, to whom he gave great credit for carrying out in such a practical manner Mr. Hunt's design. All his remarks were illustrated by very considerable knowledge of the working of the mines of this country, and of mining operations in various parts of the world.

Mr. ROBERT HUNT, F.R.S., the honorary secretary of the Association, contributed a valuable paper. This paper contains several useful remarks respecting the mineral lodes of Cornwall, and suggestions for recording the observations made on them by the mine agents of the county.—[To this and other papers we must again refer.]

Capt. CHARLES THOMAS, of Dolcoath, contributed a paper containing the results of his own experience, and to the strictures made on some of the remarks published by him a year or two since, by gentlemen who probably have not had that practical experience as he himself has had. He stated that from having carefully observed every important district, from West Cornwall to Exeter, both before and since the issue of his pamphlet, he had no reason to alter any of the remarks which he had before expressed concerning the mineral lodes of Cornwall and Devonshire. Capt. Thomas solicited the publication of any facts which appeared to be contrary to those which had been recorded by him.

A valuable paper on "Mining Machinery" was contributed by Mr. SIMS, engineer, of Redruth. Allusion was made to the improvements which had been made since the time of Bolton and Watt, and to the great importance and usefulness of the application of steam at the present time, contributing, as it does, a considerable source of the commercial prosperity of this country, and adds to the wealth of our manufacturing districts, which he illustrated by the great increase of some of our large manufacturing towns. With regard to the benefit of Cornish mining, he need scarcely make allusion to this; but the power of steam might be applied to a much greater extent, and in a more economical manner, in the erection of man-engines on the mines of this country, for the lowering and raising of miners to and from their daily toil, as well as in many operations required in mining to which it had not been hitherto applied.

After the reading of these papers discussions took place, when many interesting remarks were made by the President, Capt. Thomas Richards, of Camborne, Mr. E. H. Pike, Mr. R. Q. Couch, and other gentlemen. A tribute was paid to the superior tin dressing and other surface arrangements made by Capt. Joseph Vivian, of North Roskear, for the dressing in a more effectual manner the products of that mine.

Votes of thanks were passed to the President and those gentlemen who had contributed papers, and to the council of the Geological Society for the use of their rooms.

GLASGOW SCHOOL OF MINES—ANDERSONIAN UNIVERSITY.—It will be recollected that, some time ago, the mine owners of this district, with a view to the improvement and advancement of the men in their employment, raised funds for the establishment of a School of Practical Mining, to which students should be admitted at a merely nominal fee. The valuable services of Mr. Mark Fryar, from Bristol, having been obtained as teacher, and arrangements made with the directors of the Andersonian University, the School was opened in Nov., 1859. We understand the average attendance of students numbers 25; and it is very gratifying to learn that, out of six students recently examined by the Andersonian Board of Examiners, for the London Society of Arts, four have obtained the society's certificates for mining; and one of these has, in addition to his certificate, had conferred on him the second prize—3*l.* The award was as follows:—To James Anderson, Bartonshill, a first-class certificate, and second prize; to John Carswell, Wishaw, a second-class certificate; to Matthew Clelland, Monkland, a third-class certificate; and to Archibald Cunningham, Dalry, a third-class certificate. There seems now no reason to doubt that this institution must prove most valuable to enterprising workmen, and ultimately to employers generally.

UTILISATION OF SMALL COAL.

The valuable paper on the "Economic Value of Coal," by Mr. Dorman, read at the recent meeting of the South Wales Institute of Engineers, and the interesting discussions upon both that and Mr. Bassett's paper on "Coal left Underground," has caused increased attention to be directed in all parts of the kingdom to the question, whether we are making the best possible use of that source of England's greatness—Coal? Although few will be ready to admit the accuracy of Mr. Dorman's conclusions, that seven-eighths of the coal raised in this country is wasted, the opinion, we think, is general that any proposition calculated to bring into use the enormous quantities of small coal which at present remains on the pit's bank and in the levels comparatively, if not entirely, waste would be beneficial to the industrial world at large, and highly remunerative to the fortunate discoverer. A claim has already been made to this discovery by Mr. John Broad, of Handsworth, who has patented an invention which, it is anticipated, will at once facilitate the process of smelting and admit of the utilisation of much fuel which is now useless. It remains to be seen whether he can substantiate his claim to the attendant honours by proving to the trade generally that the invention is worthy of adoption, and capable of securing the advantages which he promises.

The object and character of Mr. Broad's invention was fully stated in the Journal of March 30; and we think it would be difficult to give a more explicit description of the apparatus. It is simply a hopper to be fixed at the top or on a level with the filling platform of a blast-furnace, with wrought-iron circular chamber from it communicating with the blast-pipes as near to the tuyeres as convenient; this apparatus being furnished with suitable conical valves, rods, levers, &c., perfectly controlling the blast, and admitting almost any quantity of small fuel into the hearth of the furnace through the tuyeres and with the blast. This fuel (small coke or coal slack in a dry state) being driven in just at the point when the greatest heat is required, and ignition taking place immediately, increases the temperature manifold, and accelerates the fusion of materials in a like proportion. The above small fuel does not fall in a mass, but trickles down in a shower, just as fast as may be required. The pig-iron is, therefore, more highly carbonised, and a vast quantity of large coal and coke saved, or, in other words, the usual quantity or charge of large coal and coke put in at the tunnel-head will carry a much larger burden of ironstone, iron ores, &c. It should be stated that Mr. Broad confines his claim to the general arrangement of the apparatus, and not by any means to the introduction of the small coal into the furnace; but as by all previous arrangements such introduction has been extremely difficult, he is certainly entitled to all credit if his patent comes into general use. The invention emanates from a practical man, and is, therefore, we conceive, entitled at least to a thorough and impartial trial, by which its merits may be finally ascertained.

HEAT IN ITS RELATION TO WATER AND STEAM.

An invaluable volume under this title, described as the second edition of a similar work, by the same author, but which, inasmuch as it has been thoroughly revised and extended by the insertion of the information acquired by an additional 20 years' experience, is almost entitled to be regarded as an entirely new work, has just been issued by Messrs. Longman, from the pen of our old and esteemed correspondent, Mr. Charles Wye Williams. In connection with the issue of the second edition it is gratifying to refer to the graceful testimonial by which the City of Dublin Steam-Packet Company have expressed their recognition of the value of Mr. Williams's 38 years' services in connection with the company, a testimonial which, although of itself insignificant, must, from the large amount of confidence which it implies in the business-like habits and scientific attainments of the recipient, be more agreeable to him than any other honour which they could have conferred; they have resolved—"That in consideration of Mr. Williams's long and active services, the publication of the second edition of his 'Treatise on Heat, in its Relation to Water and Steam,' shall be at the expense of the company." It were almost superfluous to dilate upon the merits of a work by so undoubted an authority as Mr. Williams, yet we may state that the information afforded in the second is far more minute than that in the former edition, and as the entire contents have undergone a searching examination by the author, and every inaccuracy remedied, the Treatise may now be regarded as the most reliable work of reference extant upon the subject. A most truthful likeness of the author, beautifully engraved from a photograph, is published with the work, and will be greatly esteemed by Mr. Williams's many friends.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JUNE 13.—The same gloomy account which has previously been given of the state of the Iron Trade must be repeated, without any material change. There are rather more orders for plates, but for bars and sheets the manufacturers are extremely slack. Scarcely any transactions take place in pig-iron; a few sales by needy men are at rates below what any others will accept, and which are decidedly of an exceptional character.

In the Hardware Trades the same flatness prevails. The hollow ware and lock trades are particularly dull, and all branches are depressed.

The special rules for collieries in South Staffordshire are now being generally adopted, after an extremely long delay. The process of preparing them has been as protracted and almost as troublesome as passing an opposed bill through Parliament. At first the principal proprietors of mines agreed to adopt the old rules of 1855, with scarcely any alteration, but the Government Inspector objected, and after several conferences and alterations, in which a good deal of printer's ink was expended, the rules were brought into the shape they now assume, and in which the restrictions and conditions under which mines are to be worked are rendered considerably more stringent.

It is important for every proprietor of a coal mine to bear in mind that, though the rules thus agreed upon will, no doubt, be adopted for every colliery and ironstone mine in South Staffordshire and East Worcestershire, yet that they must be adopted for each mine separately, duly posted at the colliery for 14 days prior to their being sent to the Secretary of State for his acceptance; and that this process must be gone through in the case of every mine now existing, or hereafter to be newly opened, or at which work is resumed after it has been discontinued. Some of the new provisions have reference to the 9th general rule, which provides that "A sufficient cover overhead shall be used when lowering or raising persons in every working pit or shaft, *where required by the Inspector*." The additions to the 21st and XI. rules renders this provision absolute in the case of all pits where a cage is not used, thus guarding against one frequent source of loss of life, by any substances falling down the shaft. By rule XI. the provision of the cover is rendered obligatory on the manager or ground bailiff, except in the case of sinking and pumping pits; and by the 21st rule the charter-master is responsible for keeping such cage or skip in repair, and seeing that it is used only for raising or lowering men. Another important provision with the same object is contained in rule 10, by which the duty is imposed on the banksman of keeping a free walking space round the shaft clear from any obstacles which may either cause persons to fall into the shaft, or themselves falling into it may injure those at the bottom.

The mode of signalling to persons who are about to ascend or descend has been the ground of remark. It is now provided, by various rules, that when persons are ascending or descending, two extra signals, instead of one as heretofore, shall be given, and that the engineer is to give a return signal, in the case of persons ascending or descending, to the hooker-on or the banksman, as the case may be, before he begins to raise or lower the cage or skip, as a proof of his understanding that he is to raise or lower men. By a provision in the 6th Rule the engine-tenter is to "see that sufficient length of spare chain be left on the drum when the band is down at the bottom of the pit." In the same rule it was previously laid down that the engine-tenter should not "leave the hand-gear whilst men are ascending or descending, *except in case of immediate or urgent necessity*." The clause in italics is now omitted, and the requirement made unconditional.

Accidents often happen from the banksman, or person acting under him—often a girl—pushing the skips over the mouth of the pit when there is no runner over it. By an addition to rule 20 the charter-master is made responsible for sufficient means being adopted to prevent the loaded and empty skips falling down the shaft from the surface or pit top when the runner is off. The provisions making the rules applicable to ironstone mines, under certain circumstances, and stating where wages must be paid, arise from the Act, but it is made obligatory that every workman shall be paid on the colliery where he is employed. There are also other minor additions.

It is satisfactory to learn that the additional provision, in the shape of covers for the skips to be used for men to ascend or descend, and for the return signals in similar cases, are being furnished at a good number of the mines, and as the rule gets known they will, no doubt, be universally adopted.

An engineman was charged at the Wordsley Petty Sessions, on Monday, with leaving his engine in the care of a mere boy. The Government Inspector happened to call in at the time, and at his suggestion the proprietors of the mine summoned the man, but on

his promising not to repeat the offence and to pay the costs they withdrew the charge. —A serious accident, which would no doubt have ended fatally but for the presence of mind of a banksman named Benjamin Jones, occurred at one of Messrs. Fletcher, Solly, and Ulwick's pits, Little London, on Sunday evening. William Porter, a blind man, who lives at Wednesfield, was descending the pit to commence pumping operations, and after the skip had gone a few fast down the shaft, the engineer commenced pulling it up again. He drew it higher than the pit's mouth, and Jones, seeing the probability of it being drawn over the pulley, run the wagon underneath, and told Porter to jump upon it. Porter did so, and though by so doing he probably saved his life, he unfortunately sustained very severe injuries, bruising himself and breaking several of his ribs. The engineer was searched for by the police the same evening, but could not be found, and the supposition is that he has run away.

A meeting of the creditors of Mr. George Thomson, of the Crookhay Iron-works, West Bromwich, was held on Tuesday, at Birmingham. The accounts presented showed that the liabilities amounted to 26,000*l.*, of which all but about 3000*l.* is unsecured. The assets were stated at 5600*l.* An offer of 4s. 6d. in 1*l.* was made, but the creditors asked for 5s., payable within 14 days.

REPORT FROM NORTHUMBERLAND AND DURHAM.

JUNE 13.—The Coal and Iron Trades continue rather sluggish here. The foreign exports for May show a slight falling off as compared with the corresponding month last year; the total exports from the north-eastern ports during May having been 418,543 tons, against 436,844 tons in May, 1860; the deficiency being 18,301 tons. The falling off has taken place almost entirely at Newcastle and Sunderland, a considerable increase having taken place at Blyth, and at the other ports there is little change. A considerable decrease has also taken place in the quantity of coals and coke imported into London by sea: the decrease during May was 9640 tons, and the quantity from January 1 to May 31 was 1,466,657 tons, against 1,543,887 tons for the same period last year, being a decrease of 77,230 tons. It is remarkable, also, that during May the quantity sent by rail into London increased by 25,000 tons. We must regard this state of things as anomalous, as the building of screw colliers still continues, which gives increased facilities for competing with the Midland route by rail.

The late boiler explosion at Garesfield Colliery has, besides doing great damage to the buildings, &c., seriously impeded the working of the colliery. The *Daily Chronicle*, in calling attention to the subject, makes some very appropriate remarks, and calls the attention of the coalowners and manufacturers of the district to the very useful and valuable society lately formed at Manchester for the purpose of insuring and inspecting boilers. The advantages offered by this company appear to us to be very great, and well worthy the attention of all concerned. The following extracts from their prospectus will give some idea of their views:—1. Responsible inspection of the boilers insured, by officers of the company, not only at periodical intervals, but at any other time when necessary, the object of the company being to secure, as far as practicable, safety and economy in working.—2. The risk taken by the company of all damage, otherwise than by fire, that may result from explosions or collapse of flues, whether to the boiler itself or to the surrounding property, up to the full amounts respectively insured.—3. The company makes no additional charge whatever for examination and inspection of boilers insured, or engineering advice relating thereto, however frequently such may be needed, the rates of premium covering all expenses. A registration of steam-boilers has also been established on the principle adopted at Lloyds in the case of ships, and new boilers are examined and tested by the officers of the company previous to leaving the works of the makers, and certificates are issued according to their classification.

A strike has, unfortunately, taken place at the West Cramlington Colliery. It appears that, on May 6, the workmen there served a notice for an advance of price, and on the expiration of this notice, a few days ago, they ceased to work; the works having been since that time closed. But on Monday last the shiftmen were set to work, and the manager of the colliery, accompanied by some policemen, proceeded to eject a man of the name of Jonathan Harbottle from his house. A body of the men, on hearing of this, marched to the spot where the manager and others were so occupied, and told them that they were undoubtedly acting in an illegal manner, as the money due to each of the workman had not been paid, and some of the coals worked had not been brought to surface. The manager replied that if he was wrong the responsibility rested with his employers, as he was acting under their orders. A consultation by the men then took place, and they came to the determination not to allow the furniture to be taken out of the house, until each man was paid the money due to him by the owners of the colliery. The policemen and bailiffs then ceased their operations. Great credit, we think, is due to the manager, as if he had not shown forbearance a collision would certainly have taken place, and a riot of some kind ensued. We offer no opinion as to the legality of the proceeding, but the conduct of the men cannot surely be boasted of. They evidently resorted to something like "mob law." It is hoped, however, that matters will in some way be arranged, and that extreme measures will not be resorted to on either side.

The following cases ought to be a warning to pitmen, who are sadly addicted to the practices here dealt with:—At Bedlington Petty Sessions, J. Turner, pitman, Cowpen Colliery, was charged with having, on May 25, ill-treated a pony down the Cowpen Pit, the property of the Cowpen Colliery owners. He was committed for two months to the House of Correction, with hard labour, and ordered to pay 19s. 6d. costs, or in default of payment, to be further imprisoned for one month, the last term of imprisonment to commence at the termination of the first.—George Wilkinson, *alias* the "Pumper," was charged with having also ill-treated a pony down the same pit, belonging to the same owners. The Bench considered his as being a less aggravated case, and fined him 5s. and costs, or fourteen days to the House of Correction. The fine was paid.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

JUNE 13.—The Iron Trade continues to be remarkably dull and depressed, and underselling is said to exist to a considerable extent. The prospects of an improvement are very remote, and will be so until affairs in America have taken a more pacific aspect.

The Coal Trade is in a tolerably healthy state, considering the season and the depression existing in the manufacturing districts.

One of those dreadful mining calamities, which cast a deep gloom over a whole district, occurred at the collieries belonging to the Clay Cross Company, on Tuesday evening, and has resulted in the death of at least 23 persons, as nearly as can at present be ascertained. The accident took place in what is called the No. 2 Black Shale Pit, and was occasioned by an immense body of water breaking into the mine from some old workings (the No. 1 Black Shale Pit), and in the course of two or three hours the water inundated the whole of the workings, and stopped egress from the mine. Immediately after the accident had taken place the underground managers ascended the pit and made an alarm. They descended again immediately, and took active measures for saving the men, who rushed to the pit bottom, and they were drawn up the shaft as rapidly as possible, and they succeeded in rescuing about 120 men and boys, many of whom had been immersed over head in water, and were in a drowning state. The great difficulty was to get out those men who were in the most distant parts of the mine, some of the workmen being a mile or a mile and a half from the pit bottom. All those who came to the pit bottom were got out in safety. The last man who was got out had to struggle up to the neck in water many hundred yards, and he was completely exhausted when found. The disaster occurred in the south-east end of the colliery, and it was first discovered by Nathaniel Dawes, one of the colliers. He saw the water coming out of the face of the coal. Messrs. Parker, the underviewer, and several colliers, used great exertions for the recovery of the men until the water had roofed the mine, when all hopes of saving the rest were lost, and they ascended the pit and decended at frequent intervals to ascertain if any other persons had floated to the pit bottom. Immediately afterwards preparations were made for drawing the water out of the mine, but as there is no pumping-engine to this seam the water has to be drawn out of the mine by means of tubs, which are worked by the colliery engine. Every exertion has been made to lower the water, and on Wednesday evening it had been prevented from rising, but as there had been many difficulties in the way it had not been materially lowered in the shaft, it being 7 or 8 yards deep at the bottom of the shaft. One part of the coal dips to the north and the other to the east. The old workings from which the water has been discharged have been standing about 12 years, and the workings in the No. 2 Black Shale Pit have extended in that direction for three-quarters of a mile along the boundary of the old workings, a large barrier or pillar of coal being left to dam back the water, and without any alarm the water broke through this coal in the way above described. The news of the calamity spread far and wide, and most exaggerated rumours were current as to the number of lives lost, some asserting that 300 persons had perished. Great numbers of the people from Clay Cross rushed to the colliery, and choked up all the approaches to the pit's mouth, and it was with difficulty that the crowd could be kept back until a body of police had been obtained. The men were drawn out of the mine by both the up-cast and down-cast shafts, and as each chair laden with its living and almost unrecognisable freight was drawn to the pit's mouth, there was a rush to identify them by their relatives.

A telegram of the accident was sent to Derby to Messrs. Woodhouse and Jeffcock, and to Mr. Hedley, the Government Inspector, who was just returning from an inspection of the Warwickshire collieries. Mr. Binns and his family were also returning home from a visit to Sir Joshua Walmsley, one of the proprietors of the works; and Mr. Hedley and Mr. Binns met on the platform of the Derby station, together with Mr. Jeffcock, and they proceeded to Clay Cross, and have remained there ever since, night and day, using every exertion to extricate the men. An additional pumping-engine is being put down, and a lift of pumps in the old works are being got ready for work. There is no hope for the safety of any of the men in the pit, and on Thursday evening tha water was no lower than on the previous day.

REPORT FROM MONMOUTH AND SOUTH WALES.

CARDIFF AND NEWPORT, JUNE 13.—The Abernant strike has at last assumed a very serious appearance, and the men seem determined not to resume their work, except, as they say, "the company shop is done away with." In this suicidal course they are supported, it is confidently stated, in an indirect manner, by the tradesmen of the neighbourhood. Mr. Fothergill, the managing director, has been in London for the last few days, and it is rumoured that he has sent an order down to blow out all the furnaces at once, unless the men return to their work forthwith at the reduced wages. Up to this date, however, there has been no information to confirm that report.

The great railway fight now going on in the committee of the House of Commons excites considerable attention in this district; and from what has already transpired, either Swansea or Newport are likely to become the chief ports of the Channel. The Pilotage Bill also stands committed for this week; and if Cardiff, Newport, and Gloucester will be relieved of the Bristol monopoly, shippers and owners of vessels will experience a great benefit.

Several experiments have lately been made with different qualities of iron, and the tests have been very favourable to the produce of this district, which it is hoped will cause an improvement in the long-depressed iron trade.

On Friday last, a young woman, named Elizabeth Fellows, was killed by getting entangled with the engine that runs between the Abersychan furnaces and cinder heaps. The engineer allowed her to ride on the plate of the engine, and it is supposed that her clothes caught in some part of the machinery and dragged her under. Mr. Hughes, the coroner, strongly animadverted on the conduct of the engineer, in allowing any person to ride on the engine. The jury returned a verdict,—"That the deceased died from injuries sustained by the engine passing over her."

An accident occurred at the New Lynch Colliery, Penclawdd, which has terminated fatally to Thomas Francis and Griffith John. It appears that the workings at the west had reached a fault, and six men, two in turns, were employed in cutting through to reach the vein beyond. There was a report that there were old workings along the fault to the west of it; it was, therefore, necessary that the workmen should bore before them in order to ascertain that fact, and to secure themselves against any accident from water rushing from the old levels; but it seems some of them disbelieved the report, and neglected the cautionary measures which they ought to take. However, on Wednesday morning the water broke in, immediately drowning the unfortunate men, and rising in the pit to the height of 14 yards. Immediately after the accident the engines and other appliances were set to work to pump out the water, but from the present appearances it must be some days, if not weeks, before the bodies are recovered. When the irruption took place, by the concussion of the air, three pits opened on the marsh, whose existence was before unknown, and which are covered on spring tides; fortunately it is now neap, otherwise the likelihood of recovering the bodies would be small. The colliery is owned by Messrs. Morgan, R. Sims, and Co.

The men at the Abersychan Works have resumed their employment at the reduction of 10 per cent. Notice has been given at the Goiynos Works of a similar reduction.

The Aberdare correspondent of the *Swansea Herald* writes:—Matters in this valley have changed but little since my last. The Aberdare Iron Company's forge and mill-men continue to stand out, and the most deplorable consequences are likely to arise from this obstinate conduct. All the blast-furnaces but one are entirely out of blast, and will probably not be restored to their wonted state for a year or two. Hundreds of men are already out of employment in consequence of this stupid firemen's strike. The only furnace remaining in blast is now being prepared to be put out, and the stoppage of the mine works will consequently be inevitable. All this will be productive of the most lamentable results, and probably prove to be a calamity from which Aberdare may never thoroughly recover. The coal trade does not appear to exhibit quite as much life this week as last, and everything throughout the valley wears an air of depression. During the last fortnight arrivals have still been numerous, though less so than last reported. Several vessels have been chartered for Gibraltar, Barcelona, Lisbon, Naples, Cadiz, Tarragona, Constantinople, Galatz, Christiana, Havana, Cronstadt, Mauritius, Para, Valencia, Alicante, Santander, St. Thomas, and Hamburg, and a large number for the French ports. A large French barque has been chartered for a cargo of coal to Calcutta. Rates of freight remain steady, with a slight improvement. During the week ending June 8, the following vessels arrived: Charles Lambert, from Coquimbo, with 520 tons of copper; Ophir, from Coquimbo, with 452 tons of copper ore and 150 tons of cobalt; Leonie Celine, with 150 tons of zinc ore; Florence, from Bahamas, with 410 tons of copper ore; Prudent, from Camillus, with 145 tons of zinc. During the same period 76 vessels left Swansea for foreign ports with 13,990 tons of coal, patent fuel, &c.

VENTILATION OF COAL MINES.—The following letter was addressed by Mr. J. Goodwin to Mr. E. W. Binney, F.R.S., as President of the Manchester Geological Society, and was ordered to be entered on the Proceedings of the Association:—

SIR,—From the great interest you have long evinced in everything that has for its object the improvement of the ventilation of coal mines, and thereby giving increased safety to the poor miner and additional security to the capitalist, and that in prosecuting this object you have spared neither pains nor expense, I do not hesitate to write you upon this subject, and without fear of being considered presumptuous. I see from the discussion at the Manchester Geological Institute on Mr. P. H. Holland's Sealed Lock for Safety-Lamps that you entertain the opinion that a perfect Davy lamp can explode in gas. In this opinion I beg to differ with you, and show my reasons for so doing, and fully believe that we have not a well-authenticated case of fire-damp exploding through a perfect safety-lamp of 26 or 28 meshes to the inch. If a lamp-gauze is covered with oil, or a defect exists in the lamp, so as to allow it to lose its oil, it is not fit to be worked by; and where there is any discipline no such lamp will be allowed to go out of the lamp-house for such purpose, and ought not, therefore, to be considered as a fair test. I have myself worked by the Davy lamp on many occasions when the gauze and standards have been red hot, and have been obliged to take hold of the lamp-bottom with my hat-cap when removing it to prevent being burned, and when suffered to get cold the gauze and standards have exhibited the colour of tempered steel, yet the lamp has remained perfect. I have also conducted many experiments for the purpose of satisfying myself whether a sharp jerk of the hand containing the lamp would be sufficient to explode light carburetted hydrogen gas, but have never been able to do so by moving the hand in the quickest manner I could; and on one occasion I saw a most reckless act committed by a collier at Norbury Colliery, which fully confirms my conviction of the impossibility of being able to explode carburetted hydrogen gas through a perfect Davy lamp. He and others had been wafting the gas out of a level before commencing work in the morning that had accumulated in the night, and had placed his lamp a few yards beyond the thill that formed the air-course; the gas had overcome the air, and when we noticed the lamp it was quite full of burning gas; one of the colliers took the lamp from where it stood and threw it many yards, the space through which the lamp passed by being thrown was compietely filled with gas, yet it did not cause an explosion. It is nearly twenty years since the circumstance occurred, but the effect produced on my mind was such that I retain a vivid recollection of it; there are two men now living who can bear testimony to the whole statement. The experiments conducted by me have been in thills or narrow bays, where a good current of air has been passing the bottom, and the danger, therefore, could not have been great should an explosion have occurred. I need not say to you that the gas is generally found to be the purest, or of a more highly explosive nature, in those places than elsewhere.

The only danger, in my opinion, in the use of the Davy lamp is that of allowing the workmen to work with it when it becomes red hot, and remaining too long in that state, —certainly a use they were never intended to perform. Of course, I except the risk of taking lamp-tops off, and the injuries that may arise to the gauze of the lamp from a fall of the roof or many other causes, and thus rendering it of no service. I, therefore, maintain that the present Davy lamp answers all purposes for which a lamp ought to be used,—that of proving whether gas exists in the workings of a mine before commencing work in the morning, and as often in the daytime as the working place of a miner has been vacated and comes to be re-entered. If the present lamp could be perfected, or the electric light made adaptable to the use of the miner, and explosions thereby rendered impossible, the evils arising to the workmen from breathing vitiated and poisonous air are unassailed, and excepting some corresponding step was taken to ensure perfect ventilation, so as to clear the mine of all the deleterious gases that are generated by the decaying of vegetable matter, the combustion of the lights, the decomposition of pyrites, the heating of the gob, the humid and moist state of the atmosphere, and many other causes, besides the gases usually given off in coal mines, I should consider it one of the greatest calamities that could befal the coal miner of this country. If you have ever even casually noticed the men that have worked for a few years with the safety-lamp, where it is used exclusively, you will have seen premature old age and decay stamped upon every lineament of the countenance of those who have scarcely arrived at the prime of life; and it is no uncommon circumstance for colliers of thirty to be taken by experienced judges for forty-five years of age and upwards, to say nothing of the great numbers that are hurried to an untimely grave. This is no exaggerated or overdrawn picture. What, then, would be the condition of the miner if explosions were rendered impossible; when the horrors of an explosion will not suffice to keep the mine moderately healthy and well ventilated? It is true the effect might not be so startling as when scores are hurled into eternity in a moment of time, nevertheless it would be productive of as powerful results, and would be felt as potently by both capitalist and miner, and the community at large. I put forth my views in a brief form in the early part of the present year in a pamphlet; and anticipated that it would have led to the discussion of the subject through the press, and reserved many points for that purpose, but I regret to say that no one has been bold enough to take up the subject. [This pamphlet we noticed last week.]—JOS. GOODWIN: *Hyde and Haughton Collieries, Manchester.*

SHIPBUILDING AND STEAM SHIPS.

The interesting and lucid nature of the "Encyclopædia Britannica" treatises generally is so universally known that the question has ever been, how can the article upon a particular subject be procured at a low price? rather than, can any better exposition of the subject be obtained? We may, therefore, safely dispense with comment upon the practical value of the volume* now before us. Amongst the industrial arts in which general interest is taken those which relate to naval affairs occupy a high position, and it will, therefore, be gratifying to many of our readers to learn that Messrs. Black have issued, in a handsome quarto form, the very excellent treatises on the "Theory and Practice of Shipbuilding," by Mr. Andrew Murray, and upon "Steam Ships," by Mr. Robert Murray, which undoubtedly contain a collection of the most valuable information which has ever been brought together in a work of similar extent. Every detail connected with the construction of ships, from the laying of the keel until they are in finished working condition, is minutely given, the scientific explanation of every step being accompanied by a vast amount of practical data.

Compared with the ships of our own day the early history of shipping, which forms the introductory section of the work on Shipbuilding, is particularly interesting. The reader is led from the earliest period to the time of the *Warrior*, the *Black Prince*, and the *Gloire*. The marine of England seems to have been maintained upon a comparatively powerful footing up to the period of the Norman conquest; and from the naval forces at the command of Harold the Saxon, in comparison with the insignificance of the shipping which brought William and his Normans across the Channel, there can be no doubt that had Harold relied upon his naval strength the conquest of England would never have been achieved; but by some fatality his fleet, which had been long stationed off the Isle of Wight, was dispersed in consequence of a report that William had abandoned his enterprise.

The introduction of vessels propelled by sails for the purposes of commerce would necessarily cause a change in the constitution of the fleets assembled for the services of war, and this will be found to have been the case. Henry VIII. was deeply sensible of the necessity of a permanent and powerful naval force, and established the Navy Office, and also several dockyards for building and repairing the ships of the royal navy. Amongst these were Woolwich, Deptford, and Chatham. He also greatly added to and improved the dockyard of Portsmouth. He invited from foreign countries, particularly Italy, the commercial cities of which were still in advance of the rest of Europe in the maritime arts, as many skilful foreigners as he could allure either by the hope of gain or by the honour and distinguished countenance he paid to them.

From the building of the *Henri Grace à Dieu* by Henry VII., a very excellent engraving of which from the Pepysian collection accompanies the work, to the present time the progress has been continual and satisfactory, until now we may hope that iron is almost universally admitted to be the most appropriate material for the construction of shipping. Tables, diagrams, and formulæ are given in profusion, and we doubt whether there is any matter of importance connected with the subject treated of which would be sought in vain.

* Shipbuilding and Steam Ships. By ANDREW and ROBERT MURRAY. Edinburgh and London: A. and C. Black.

OUR IRON FLEET.—Since the building of wooden war-ships has been discontinued, and iron and armour-plated vessels have become the order of the day, largely increased interest has naturally attached to everything connected with the iron and steel manufacture, and especially to such branches of it as are associated with the production of ship-iron and ordnance material. It will, therefore, be gratifying to learn that Messrs. John Brown and Co., of the Atlas Steel and Spring-works, Sheffield, are busily engaged in the manufacture of rolled iron armour-plates for the Government. To meet the demand upon them for this and similar work, they have extended their establishment considerably; an idea of which may be given by stating the capabilities of the furnaces and rolling-mills which are being erected to carry out the manufacture of iron and steel by the Bessemer process. Mr. Bessemer has not gone farther than to make 1 ton at a time, but Messrs. Brown and Co.'s furnace will convert at once 4 tons, and the ponderous ingots will be beaten into the shape they are to assume by a 12-ton steam-hammer. An experiment has been made this week with the Bessemer furnace, when 3 tons of steel were made into three ingots. In a few weeks this part of the manufactory will be fairly at work.

TRUTH'S ECHOES; OR SAYINGS AND DOINGS IN MINING.

There appears to have been a fair amount of business transacted during the week, exclusive of that connected with the "account," which affords satisfaction to find *bona fide* business being negociated. The "account" for the settlement of shares for the past fortnight was held yesterday, when the duties of the day passed off as usual, without any very great misadventure, notwithstanding there were more shares for delivery than money to pay for them, consequently there was mild endurance, affected fortitude, disappointment, and deep chagrin visible in the respective countenances.

There has been a good enquiry for DEVON GREAT CONSOLS, and several shares changed hands. The price has, consequently, advanced.——EAST WHEAL BASSET shares have been transacted at lower rates.——SOUTH WHEAL FRANCES and WHEAL SETON shares have been dealt in at quoted prices.——COOK'S KITCHEN shares have been negociated at lower rates, notwithstanding the mine continues to look remarkably well.——STRAY PARK shares are firm at present prices, but few transactions reported.——CARN BREA shares have been in request, but found scarce.——EAST CARN BREA and SOUTH shares have found buyers, without any material change.——WEST CARADON shares rallied slightly, from a reported improvement, but they have not maintained the advance; shares are more freely offered.——SOUTH CARADON shares have been in fair demand, and still in request at buyers' prices.——EAST CARADON shares kept the advanced price until Wednesday last, when "wires" were received, advising a falling off in both ends of the 60, which caused a reaction, and a great many shares were sold at lower rates: they have shown a considerable tendency to improve, and likely to do so.——MARKE VALLEY shares have been in good demand at the advanced rates, but they have slightly receded.——LUDCOTT shares have been in request, without any important change in price.——HERODSFOOT shares are in good request, and firm at present prices.——MARY ANN shares continue very weak, whilst TRELAWNY shares have been more enquired after, and dealt in.——WHEAL WREY shares have receded, and met few buyers.——SORTRIDGE CONSOLS shares have been actively dealt in at advanced rates, consequent on an improvement in the 40 east; notwithstanding, some fluctuations have taken place.——EAST RUSSELL shares have considerably receded, and each transaction at lower prices.——LADY BERTHA shares continue depressed, and but little dealt in.——EAST DEVON CONSOLS shares have been in demand, and prices advanced, in consequence of an anticipated improvement, but they show a tendency to recede.——GREAT WHEAL MARTHA shares have been in good demand, and several transactions taken place at improved rates.——CREBOR shares have been more in request, at improved prices.——EDWARD shares have been dealt in at former rates.——WEST POLMEAR shares have been fairly dealt in, although the prices have slightly fluctuated.——WHEAL UNITY shares show a declining tendency.——EAST GRENVILLE shares have been largely dealt in during the week, and, as usual, the prices have varied, and offered freely at lower rates for *time*.——EAST TOLGUS shares have been in request, from a reported improvement in the mine.——WENDRON CONSOLS shares have been offered at lower prices, but buyers rather scarce.——GREAT WHEAL FORTUNE, PROVIDENCE, and WHEAL MARGARET shares continue to find buyers, but without any improvement in prices——RIDDEN, DALE, CALVADNACK, SILVER BANK, and a few others, have been in fair request, whilst the former show an upward tendency.

EAST CARADON: The caunter lode in the 60 east is not quite so good as last reported, but is worth full 90*l.* per fm.; the western end is worth full 100*l.* per fm.; they are only carrying 5 ft. of it, consequently the value of the remaining 2 ft. is not given, nor will be until taken down, although still estimated from 30*l.* to 40*l.* per fm. In driving the cross-cut south from this lode (60) on Wednesday night, they intersected a branch of very rich ore, yielding about 1 ton per fm., and are in daily expectation of cutting a fine lode. Fawcett's lode, when last taken down, was worth 10*l.* per fm.; the ground in the present end has improved, and shows strong evidence of further improvement. All other productive places continue without change. My stating that the above may be implicitly relied on would be superfluous, but when strong efforts are being made to lessen the value of the ends, the observation may not be unnecessary. Those who place more confidence in the views of occasional visitors can act accordingly.

At HERODSFOOT four-monthly meeting the accounts showed a profit of 2066*l.* 15s. for that period, and a dividend of 2*l.* per share was declared. The mine is reported to be looking well, and likely to keep up their present returns and profits.——MARKE VALLEY continues to look remarkably well; they have excellent courses of ore in the 80 and 90 west, and all other places returning the usual quantities.——WHEAL CREBOR is reported as looking better in the 60, both east and west, where they have a large and promising lode. In the eastern end the lode for 18 in. is producing saving work for copper.——At BOTTLE HILL they are much retarded for the want of surface water, in consequence of the dryness of the season; efforts are being made to return the tin raised, estimated about 8 tons.

WHEAL EDWARD is looking very well, and they are developing some excellent orey ground; they have a good course of ore in the 71 west, worth full 5 tons per fm. In the 61 west they have gone through a good run of orey ground, worth from 3 to 3½ tons per fm.; the end and stopes are still of that value. There are other productive places looking very well.——At SORTRIDGE CONSOLS they have a discovery in the 40 east, south of the main lode (and parallel to the great course of ore they had some years since), and will turn out full 3 tons of ore per fm., worth from 10*l.* to 12*l.* per ton.

At TAVY CONSOLS they have made a very valuable and important discovery in the 50 east, the lode being cut by a cross-cut north. Should this improvement hold good, there is no doubt but a valuble piece of ground in the eastern part, adjoining Lady Bertha, can be taken away at a low cost. It is to be regretted that this property should have been involved in such a series of embarrasments and predicaments by the gross mismanagement which has been pursued; but it is to be hoped that the heavy losses sustained by the executive will prove a lesson to all interested, and that the mine, which is represented to be a really valuable property, will yet reimburse the outlay of the hitherto unfortunate shareholders.

At FURZE HILL WOOD, in extending a cross-cut from the engine-shaft they have intersected a lode from 3 to 4 feet wide, being good work for tin, worth full 25*l.* per fm. This discovery is considered highly important, inasmuch as it is the first discovery under the deep adit, and, from the immense quantity of tinstuff taken away in former workings above the adit, and the improvement 10 fathoms deeper, is looked upon as a very favourable feature.——At WHEAL ANNE (St. Austell), they have intersected Allen's lode in the shallow adit, which is 5 feet wide, producing some good work for tin, worth, as far as opened, from 10*l.* to 12*l.* per fathom, and can be broken for 40s. per fathom, which renders it a profitable work.——At EAST TYWARNHAILE, arrangements are being made for the working of this property, and from the general opinion of the property entertained by practical men the locality is a sufficient guarantee for the success of the mine.

At WEST POLMEAR the prospects are considered highly encouraging; from its proximity to Wheal Polmear and the courses of ore not being far distant, there is every reason to calculate on possessing a portion of that wealth which the continuation of the same lodes are likely to convey.

At GREAT RETALLACK, the lode in the 35 east and west continues to produce fair quantities of blende, and looks promising for lead in depth. Preparations are being made to sink to a 45 fathom level, which when completed a change is fully anticipated. 500 tons of blende are intended to be sampled on Wednesday next.——At SOUTH WHEAL KITTY the prospects for a good and productive mine continue without any diminution, and the arrangement about being made for the necessary machinery is satisfactory.

TRELOWETH maintains its prospects very satisfactorily; all the productive places are returning fair quantities of ore. There have been some slight improvements during the past few days, which are likely to become of more importance, but until that is realised it would be premature to place greater value on them before more fully developed.——PENDEEN CONSOLS continues to look very promising, the several productive places without any visible change. Some tin is coming in, and, from the fact that a valuable piece of tin ground untouched shows ahead of the present drivings, it is hoped much assistance will ultimately be derived from that source. JAMES LANE.

Mr. WILLIAM AVENS (of the Stock Exchange) writes:—The money market is comparatively favourable to mining investments, although the Bank minimum is likely to remain at 6 per cent. until the July dividends are dispersed. The present is the time to buy in the best established mines, and the soundest of the progressive descriptions. In a month hence shares will not be at their present low price. The money market has fully recovered from the unreasoning semi-panic which pervaded it after the announcement of the Indian loan. The mere fact of power being taken to raise a sum of 4,000,000*l.*, within a period of three months, perhaps, from the middle of July, was in itself not sufficient to create anything like apprehensions as to the effects upon the money market; but the indefinite and gratuitous statement that further sums might be needed, and would be asked for, was exactly one of those imprudencies which, falling from the lips of a Cabinet Minister, was sure to create serious apprehensions. These apprehensions led to large sales of Indian and other securities.

From Mr. EDWARD COOKE:—The business during the week has been of a moderate character. EAST CARADON and EAST GRENVILLE shares seem still to monopolise the attention of the market. Both of these mines have receded in price; the lode at the 60, in the former mine, has fallen off in value from being worth 120*l.* to 100*l.* per fm., although one report stated the lode to be worth respectively 70*l.* and 80*l.* per fathom. We have good reasons, however, to believe that the former is correct. With a lode worth 100*l.* per fm., and such large reserves as there are in East Caradon, those who hold the shares for investment need not be much alarmed at a little fluctuation in the price of their property. WHEAL NORRIS shares, in the same district, have been largely dealt in at an advanced price. This mine will become, in all probability, a very valuable one, and the shares are well worth buying. There are several other mines that are depressed just now, in consequence of the dullness of the metal market. Those who have spare capital to invest, and who can afford to wait a few months for results, would do well to select some of those that possess the greatest merits at the present period. WEST CARADON shares have not fully maintained their late rise, although we still believe they should be bought and not sold. SOUTH FRANCES shares have been in good demand, and have advanced to 14*l.* The prospects in this mine are gradually improving, and it would not surprise us to see them 20*l.* higher before many months have elapsed.

From Mr. W. LELEAN:—Since my remarks of last week our market has assumed a more healthy appearance. I am pleased to notice that the public have drawn their attention to sound dividend and progressive shares, whilst, on the other hand, the market schemes are, meriting their own reward, becoming utterly neglected. Margery, Bryn Gwlog, Treiyon, Wheal Polmear, West Condurrow, South Condurrow, East Treskerby, Margaret, Providence, Botallack, North Levant, Rosewarne Consols, East Basset, Nantees and Penrhiw, Charlotte United, South Darren, Durlo, East Providence, Rosewall Hill and Ransom United, are mines, in my opinion, worth buying at their present low prices. At Wheal Margery the returns are not equal to the costs; but in my opinion, from the statements made to me, the prospects of a good mine in depth are great. Treiyon is improving daily; the lode in the new shaft is worth 30*l.* per fm. for the length of the shaft (10 feet), opening good tribute ground. The agents' reports are favourable for a dividend mine at no distant period. There are only 572 shares, and the price is about 15*l.*—a good investment. Wheal Hearle made a profit of 120*l.* last month—a first-class investment. This ranks with West Condurrow, South Condurrow, East Treskerby, Nantees and Penrhw, South Darren, and Wheal Margery, the reports of which will be found in another column. At Wheal Margaret they have cut the lode in the 130—not rich, but quite equal to the expectations: 10 fms. are set to drive east, to cut the tin lode under the winze in the 120, in advance of the cross-cut at the 130. Every point of operation in the mine is reported as looking splendid. They pay, at the present price, 12 per cent. —a good share, and the management sound. Providence shares are enquired for, and are likely to improve at the end of the year. At Spearne Moor the account has not proved so satisfactory as was anticipated, and the few orders that remained on hand for the shares have been withdrawn. The new diagonal shaft will take at least three months to complete to the 110. When this is completed it is expected the returns will be fully kept up, and the present dividend continued, if not increased. North Levant (adjoining Levant and East Levant on the west, Atlantic Ocean on the north, Pendeen on the east, and Boscaswell Downs and Hearle on the south) is considered a good speculative investment. Their present returns of tin are considerable, and when the points of operation come off that are now being prosecuted vigorously more light will be thrown

on the matter; meantime I wish to direct capitalists to the adventure. The present management is sound and practical. At the Durlo account, held last Tuesday, there was a balance of 376*l.* to the credit of the mine. Dividends may be confidently expected at the next account. Ding Dong is looking better; and although the accounts showed a balance of 689*l.* 10s. 10d. against the company it was not thought necessary to make a call. Mr. G. S. Bolitho, of the firm of Messrs. Bolitho Brothers, bankers, is the purser, and Captain Truran, a most intelligent and respectable man, is the manager. In conclusion—The present fine weather has, no doubt, contributed largely to the improved tone manifested by operators in the funds and share stocks generally.

ON VARIOUS MINES AND SHARES.—CEFN CILCEN (lead), in the Wrexham, Holywell, district, in 2500 shares, paid (according to the Journal) 25s. per share, has suddenly exhibited signs of great and permanent success, and the shares, in consequence, in considerable demand. The latest advices represent a report by the agent, Capt. Williams, as very moderate, since much more might be said in favour of the discoveries which rank it as a "*splendid* mine." From other sources it is predicted that before long it will be in a position to pay dividends, and thus add another item to the rapidly-extending list of successes in the above district, fast becoming an EL DORADO. As a matter bearing materially upon the economical working of the concern, it may be mentioned here that the entire mine is unwatered naturally by a "swallow," and there is already, at a most moderate outlay, an extent of shaft sunk and levels opened to render calculations of profit easy, and consequently the shares are susceptible of a considerable advance.——BRYNFORD HALL AND HERWARD UNITED: Both these mines are much, and, as it appears, unnaturally, depressed, although excellent speculations. The former paid the last call in October, 1860, of 2*l.* 10s. per share, and left a fair balance at the last meeting. The latter made a call of 3*l.* per share lately, but the lodes have since improved, and are improving, in value. Half a year ago the shares were scarce to obtain at respectively 27½ and 24½ per share, and they now rank at a discount from these rates of 40 per cent., but are susceptible of a sudden advance, and should be watched. The shares are 200 only in each.——WHEAL MARY ANN (lead), in Menheniot, Cornwall, in 1024 shares. There appears nothing in the condition of this concern to justify the heavy fall from 20*l.* in March last to about half the price; and observant holders of shares in the Liskeard group of mines need not be reminded that considerable control is exercised over the district by capitalists on the spot, and hence, partly, the severe depressions, and as remarkable advances, in the properties in question; besides that, as a maxim, almost any respectably-managed mine, although its lodes may have gone temporarily into abeyance, may be invested in at such a serious rate of depression, whilst in this particular instance the produce has been rich silver-lead ore, giving dividends up to this date amounting to nearly 60,000*l.* Can such a mine become suddenly extinguished?——PENHALE MOOR: After a long period of depression there are great hopes, if not certainty, of a good and lasting mine, the improvements lately reported being that a rich bunch of tin has been met with in the eastern shaft, 1 ft. wide on its first discovery, and since much improved, and likely to continue; and there is, besides, a good parcel of ore monthly raising on tribute. The shares remain, however, owing perhaps wholly to the general depression in the market, at a low figure, but it is believed they are worth immediate attention from investors.——NORTH LAXEY, the writer thinks, is rather overlooked and underrated as a very promising lead mine. There are 6000 shares, and 10s. more per share to call up under the Limited Liability, on 2400 of that number, the remainder being fully paid. For some time there have been progressive improvements in the lodes, a repetition of which is unnecessary, from their being fully reported in the Journal. Shares are offering for sale at par, which they appear to be worth, although some holders might accept lower offers.——The LAXEY MINES (Isle of Man, of which North Laxey is an offshoot), in 20 shares, stand at 1200*l.* per share, with 100*l.* paid, and they have yielded nearly 29,000*l.* in dividends, the last of which was paid in 1857, of 50*l.* per share. There is, however, a capricious character about all lead mines which makes them the choicest of speculations, sudden improvements from bunches of ore sending them up in an hour many hundreds per cent., and such an event happening in Laxey would be electric in its effects upon the adjunct under discussion.——WORVAS DOWNS (tin), in Lelant (a first-rate tin field), is in 1024 shares, 3*l.* paid. The shares have seen high rates, and are, as a general rule, more easy to buy than to sell, but as it is believed the mine has merits, that fact may be treated as an unimportant one by investors (as distinguished from speculators in shares for a rise only), whilst the moderate number of shares renders it an unlikely event for the market to be flooded with them, except under adverse circumstances of the produce; and on this head the reports are good and encouraging, regularly made, and very business-like.——CARN CAMBORNE: Mr. J. Y. Watson, in his "Notes," heralded the introduction of this concern in glowing terms, and, as it appears, not in the least degree exaggerated, the shares being highly estimated, and from which fact the inference is drawn that the mine will bear scrutiny. Of course it has been helped on by the *prestige* of neighbouring mines, and the heavy interest the shareholders of East Caradon have absorbed, making it almost a close borough as regards shareholders. It appears by a report from Captain H. C. Vivian that the mine is a "ready cut and dried" one, as a beautiful lode of yellow ore (copper) is already available in the back of the adit, and worth 12*l.* per fm., and also that the workings in the 12 can be resumed in a few days by the abstraction of the water. There is also, it appears, a counter lode in reserve as to working upon, but visible in the adit, where its impregnation with copper ore is described under the metaphor of "green as a leek." The fact is important.——PROSPER UNITED: Commercial disasters, dearness of money, wars, or rumours of wars, are no respecters of mines. These said, and believed to be, excellent shares have succumbed in market value to the circumstances of the times, having been offered rather freely under par. On the 2d of July a meeting is to be held, and a call to be made (as rumoured), and it is probable the fear of this call has operated more than passing events in producing some sellers, to whom a heavy call would be an inconvenience. The mine, however, remains intact, as one likely to give good results when the expensive machinery necessary for its development comes into action; and in this view it is a share rather to hold (which is the policy of the principal adventurers) than to sell; and besides, it may be noted that a large capital was raised on the introduction of the concern, and not yet exhausted in the working of it, and, therefore, the call in prospect is to pay for engines, &c., and will rank under the head of additional capital, and should be regarded as merely expended, and not sunk.—J. C.

PRICES OF MATERIALS,

As charged at the GREAT WHEAL VOR UNITED MINES during the following months:—

Description.	Jan.	Feb.	March.
Coals, common ..... per ton	13s. 6d.	13s. 6d.	13s. 6d.
„ Cardiff ..... „	19 2	19 2	19 2
Iron, common ..... per cwt.	—	—	7 6
„ Crown ..... „	11 6	10 6	10 6
Steel—blister and cast ..... „	—	50 0	—
Nails, patent 4-inch ..... „	19 9	—	—
Tallow ..... „	64 6	64 6	63 6
Oil, Gallipoli ..... per gal.	5 9	—	—
Candles ..... per doz.	7 0	7 0	7 0
Hilts, pick ..... „	1 6	1 6	1 6
Powder ..... per 100 lbs.	—	54 0	—
Cartridges ..... per 100	42 0	42 0	42 0
Leather, bend ..... per lb.	—	2 3	2 3
„ butt ..... „	2 0	2 0	—
White yarn ..... „	—	0 5½	—
Hemp ..... per lb.	0 5	—	—
Stamps' heads ..... per cwt.	—	—	8 0
Rope, capstan ..... „	—	46 0	—

PATENT LAW.—The second edition of Mr. Spence's pamphlet "Look to your Provisional Specifications" has just been issued, revised and augmented by the addition of several important decisions bearing out the arguments he adduces. Upon the question of continuing provisional specifications (that is, of securing protection beyond the time granted by the Commissioners of Patents upon the lodgement of the provisional specification) by filing a second provisional specification before the former one has been officially published, Mr. Spence's view is entirely opposed to our own: he maintains that inasmuch as the second provisional protection is obtained before the invention for which the first is granted is made public, the inventor's rights are not prejudiced. In other words, Mr. Spence contends that provisional protection can be secured for ever at a rent-charge of 10*l.* a year (or rather for the year *minus* two days). If this view be correct, what possible advantage does the new law possess over the old? For the sake of inventors whose ideas are so confused that they have to re-invent several times before their discovery can be made of practical utility, we might wish that Mr. Spence's view were correct, but for the good of the country generally we sincerely hope it may be erroneous. Although Mr. Spence's information must be received with caution, his book, costing only a few pence, is worth reading, as some useful hints may be obtained from it.

DR. MUSPRATT'S DICTIONARY OF CHEMISTRY.—Another very flattering compliment has been paid to our eminent townsman by a gentleman in Lisbon, writing to a firm in this town. It is as follows:—"Will you forward me a copy of 'Chemistry, Theoretical, Practical, and Analytical, as applied and relating to Arts and Manufactures,' by Dr. Sheridan Muspratt, &c., bound in boards. I want the book for a friend of mine, who has seen some extracts from it; and he says it would have saved him 150*l.* had he known of it twelve months ago. He is an oil merchant." As justly said by one of our ablest *litterateurs*—"To be appreciated in a foreign land sounds like the distant plaudits of posterity."—*Liverpool Daily Post.*

At Delabole Slate Quarries the owners' account men struck for 1s. per week advance, which, in consideration of the advancing price of provisions, has been granted.

THAMES TUNNEL COMPANY.—Receipts for the week ending June 8, 51*l.* 19s. 3d.; number of passengers, 12,471.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending June 9 was 11,932*l.* 1s. 5d.

SCIENCE FOR THE PEOPLE—THE EARTH'S CRUST.—The number of individuals interested in mining enterprise being almost daily on the increase, much importance naturally attaches to any attempt that may be made to render the structure of the Earth's crust more generally understood. To a large number of capitalists deeply concerned in mining geology is regarded as one of the most mysterious sciences that can be conceived, whilst the want of at least a superficial knowledge of it causes mining adventure to be far less attractive to them than it otherwise would. As is the case with all knowledge, the success of the learner depends almost entirely upon the skill of the teacher, and this will, we think, be at once admitted by mine adventurers, though they be those who have hitherto considered geology as repulsive, upon paying a visit to the Polytechnic Institution to study the geological models which have recently been constructed there, and hear the very lucid explanations of them daily given by Mr. King. The models have been arranged in a most natural and comprehensive style by Mr. Phené, the managing director of the Institution, and permit of the structure of the earth being readily understood by all. The series commences with the oldest or unstratified rocks, and gradually continues through the primary, secondary, and tertiary periods, until at length the earth, as we at present see it, is reached. The order in which the various stratified rocks are superposed may be at once comprehended, and as a similar order invariably prevails, though some of the strata may be wanting, the capitalists speedily gain such an amount of knowledge as will prevent him from anticipating the discovery of coal or other substance in positions where geologists know it cannot exist. The models are enlivened by the introduction of minature mines, in full work, of the character met with in the respective rocks; an attractive working model of a silver mine, for example, being placed in the lower series; a coal mine to represent the series in which is found the carbonacious formation; and basalic caverns in their proper place. Each model is surmounted by a characteristic painting, well calculated to impress the series upon the memory. But it is not alone the educational advantages of the Institution which renders the Polytechnic worthy a visit—instruction and amusement are intimately combined, so as to permit of a few pleasant hours being passed. The electric light produced with a lamp, which enables a nearly continuous and very satisfactory light to be ensured for any length of time, is likewise exhibited. The Polytechnic at the present time offers one of the most amusing entertainments in the metropolis.

MACHINERY FOR CRUSHING QUARTZ, &c.

Messrs. G. F. Goble and F. S. Hemming have specified their improved machinery for crushing quartz and other substances, and for mechanically and chemically extracting gold from auriferous stones or soils, and for procuring silver, copper, zinc, lead, iron, and other metals from their respective ores or impregnated liquors. Their machines are made of various sizes and plans, according to the substances to be pulverised. As a general rule, each machine consists of a circular trough or troughs, mostly of metal, placed upon any firm level base. In these troughs are placed one or more edge runners, sometimes peculiarly grooved with steel facets. In certain cases they make one of the fluted edge rollers to perform the part of a first breaker or cracker, as well as the first edge crusher, by suspending clear of the trough on a separate axle, nearly close to the first large wheel, a smaller fluted roller rotating the reverse way by means of a wheel, pinion, fly, or such like. On the top of this pair of reverse rotating fluted rollers is fixed a hopper, to carry a quantity of the crude matter to be first broken, as the stuff gradually descends betwixt the grooved edges of the two crackers while the whole machine is going its usual rounds, which progressive motion of the prime roller causes the momentum of the quick revolving suspending breaker with its heavy fly-wheel to first break the crude stones, bones, or other similar matters about the size of eggs, preparatory to the advancing heavy edge runners passing over the broken fragments the instant they fall in the trough equally distributed all over the bottom, which when finally pulverised are scraped into proper receptacles by hoes attached to certain parts of the rotating framework. As the hopper is supported upon the axles of the crushing wheels, the heavier it is loaded the more pressure is then added to the prime edge crusher, consequently the dead weight of the rough matter is here made to greatly assist in powdering the first cracked pieces the moment they reach the trough before the coming rollers. In some crushing machines between the rollers and upon their arms they arrange heavy beaters, stampers, and pounders, or breakers, to rise and fall at certain distances by means of curved handles or levers striking against fixed projections while the wheels and stampers rotate round the trough. From these massive beaters, with their levers being suspended to the axles of the edge runners, their weights very materially assist the pressure of the wheels in powdering coarse particles. Generally they propose to cover the faces of these stampers or beaters, as well as the edge runners, with steel facets. Against one or more of the stampers they intend to arrange a shelf or hopper to admit the crude materials under them just previous to their passing. When circular machines cannot well be worked, and for cheaper crushers, they arrange a set of beaters in one or more longitudinal troughs, each series of hammers to be made to rise and fall by passing under or over projections, such stampers to be suspended, and carried backwards and forwards by means of two, four, or more broad wheels travelling over the broken fragments in their respective channels, such rollers with their ponderous loads of strikers to act the finising part of finally pulverising the coarse particles, which the rough faces of the mauls do not powder. Nearly all the crushing machines will be so contrived as to be worked by either steam, water, wind, cattle, or manual power, whilst their portability will be such that one pair of rollers on the same axles can quickly be made to carry the segmental trough and other gear upon them ready to be moved from any locality to another by manual or cattle labour.

The next kind of mechanism used for assaying minerals in large operations may be termed matrases, or troughs, for the purpose of holding the chemical dissolvents, porous batteries, and other requisites; what they propose are cisterns formed of good and well-seasoned planks, similar to horse-watering troughs, narrowing towards the bottom, but instead of being made parallel, Messrs. Goble and Hemming form them out of broad tapering boards, the narrowest part of the sides secured to the widest end of the bottom; after being well bevelled they spread the top open; the inside of the bottom must have longitudinal strips of wood about an inch square secured to it a few inches apart, so that the nuggets or heavy pieces of metal can fall between while the soil within them is undergoing maceration. Whether these matrases are made to contain 100 or 1000 gallons each, they ought to be so arranged for any number to easily transfer their contents from one to the other, and *vice versa*, either by placing the lowest end of one trough above the highest level of the next, and so on, if only one way is desirable; but to answer both ways they prefer to arrange as many cisterns as requisite, all about level on their tops, leaving their deepest sides with their bottoms to have the surplus fall, the better to allow such long cisterns when filled with crude matter to be easily drained; they, therefore, set any series of tanks, not only level on the top, but parallel about a yard or so apart, for workmen to get easily between them, and when it is requisite to transfer any portion or drain away the whole of the liquid in any one or more cisterns to any contiguous or intermediate matras, they merely case the ends of the emptying trough to be lifted in their standards the height requisite, either by screws, levers, wedges, pullies, or other simple contrivances to hold them at the angle most suitable to drain the solution from the other contents. In certain temporary works they erect prepared portable coffer-dams and other reservoirs, using hollow cane syphon-pumps for transfering the requisite chemicals used in the processes.

WEEKLY LIST OF NEW PATENTS.

APPLICATIONS FOR LETTERS PATENT.—Messrs. BOLCKOW and VAUGHAN, Middlesborough: Railway sleepers.—R. HARLOW, Heaton Norris: Bridges and tubes of steam-boilers.—H. DE SIMENCOURT, Corbyn's Hall, Dudley, and J. K. BLACKWELL, iron master: Reverberatory and other furnaces.—S. BENNET, Handsworth: Utilising waste tubing.—A. A. CROLL, Coleman-street: Sulphate of alumina.—C. W. LANCASTER, New Bond-street: Metallic sheathing.—J. ROMAN, Liverpool: Economising fuel.—J. RYDER, Avenue-road, Regent's Park: Permanent way of railways.—R. ARMSTRONG, North Woolwich: Marine Steam-boilers.—D. ROLLO, Victoria Engine-works, Liverpool: Valves.—W. WELLER, Mile End: Supplying fuel to furnaces, preventing smoke, and economising fuel.—M. HAWDON, Blaydon, Durham: Moulds for casting metals.

MANUFACTURE OF CAST-STEEL.—An invention has just been patented by Mr. R. Mushet, of Coleford, which consists in melting blister, steel-bar or puddled-steel, or scrap-steel, or mixtures of these varieties of steel, or a mixture of malleable iron and carbonaceous matter, in the proportions which constitute steel, with New Zealand iserine or titaniferous iron-sand and carbonaceous matter, or adding the said titaniferous iron-sand and carbonaceous matter to the steel, or to the mixture of malleable iron and carbonaceous matter during the melting of the same, or after it is melted and reduced to a liquid state, and, lastly, in adding to highly carbonised steel New Zealand iron-sand, without additional admixture of carbonaceous matter, and melting the said highly carbonised steel and the titaniferous iron-sand together in a melting-pot or crucible. In this case the excess of carbon contained in the highly carbonised steel suffices in place of any further addition of carbonaceous matter to reduce the iserine or titaniferous iron-sand, either partially or wholly to the metallic state.

IRON AND STEEL.—Messrs. Bower, of Hunslet, York, propose to purify iron or steel by adding thereto chloride or perchloride of iron. In the conversion of steel, charcoal is also added in the crucibles.

SUPERHEATING STEAM.—An invention has been provisionally specified by Mr. Grimshaw, of Lytham, which consists in conveying the steam-pipe from the boiler of a locomotive engine into the smoke-box, and thence partly up the chimney, within which it is coiled previous to descending to the steam-chest; by this means the steam is superheated before it enters the steam-chest and cylinders of the engine.

ROTARY ENGINE.—Messrs. Graude, Olivieri, and Mongiardino, Turin, propose in a circular machine or box to place a solid iron bar in the form of a semicircle, occupying half of the circumference of the box; the object of the bar is to force the steam which issues from the top of the box to bear continually on one side only. This machine or box also contains a concentric wheel fixed immovably to an axle, being fitted with two pairs of articulated valves diametrically opposite to each other, and which, occupying successively the space in which the steam circulates, are forced by the current to give a rotary motion to the axle.

THE LIME LIGHT.—An invention has been provisionally specified by Mr. A. H. Renton, of Cambridge-street, Eccleston-square, which relates to apparatus employed in the production of light, more particularly when oxygen and hydrogen gases or their compound are consumed upon lime, and consists in combining the apparatus by which the gases are generated with that by which they are consumed in a case or other receptacle within the base, or otherwise attached to the lamp containing the lime or other material, so as to constitute a portable lamp when desired, capable of being moved from place to place, or a fixed light when required to be stationary. He effects this by placing the generating apparatus for both the gases employed within the pedestal of the lamp, or contiguous to it, such pedestal or other receptacle being of limited size, as the generation of the gases are regulated by the consumption thereof, by which arrangement pipes, capacious gas-holders, and the usual appendages to the generating portion of such system of lighting are dispensed with, thereby producing a more economical apparatus for the production of light, and conducing to its use under circumstances where such lamps or lights could not or would not be applied.

UNITING PIPES OR TUBES.—Mr. A. Delaporte, Paris, proposes to unite pipes or tubes by means of a collar free to slide along the tubes, and so formed as after being brought over the abutting ends of any two pipes required to be joined to leave a space between the inner surface and the pipes. Mastic or cement being poured into a collar through an aperture provided for the purpose, a hermetic joint is formed.

STEAM-ENGINES AND BOILERS.—A series of improvements upon an invention patented by Mr. J. C. Pearce, of the Bowling Iron-works, in 1856, have recently been provisionally specified by the same gentleman. He constructs pistons with double wearing rings, forced forward by wedge-shaped spring rings; he fixes the piston upon the rod by means of keys driven into suitable grooves formed in the eye of the piston, and in the conical part of the rod. He forms the throttle-valve in two parts, each furnished with apertures which coincide with each other in one position, and may be closed to any extent; and in another arrangement the valve is made to slide through a double seating, the latter being composed of one or two parts, as most convenient, in this case the apertures in the seating are dispensed with. In boilers he proposes to apply water spaces in the fire or smoke-flues to increase the evaporative power of the boiler. He constructs the furnace-grate of two longitudinal parts, connected together with a series of light cross ribs to secure a better supply of air; and applies a safety-plug of easily fusible metal in the most dangerous part of the boiler.

LUBRICATING COMPOSITION.—Messrs. Clark and De la Mare, of Jersey, propose to employ an improved lubricator, composed of one-half oil and one-half liquid, obtained by the following process:—They take of lime, 30 lbs.; soapstone powder, 15 ozs.; calcined magnesia, 15 ozs.; chloride of lime, 2 ozs.; husband magnesia, 2 ozs.; to these, when mixed together, they add by degrees 32 gallons of water, taking care to keep stirring the mixture while the water is being added. The mixture should then be allowed to settle for about four hours, when the liquid may be drawn off, and, when combined with about equal parts of oil, be used as a lubricator. When combined with other lubricators than oil, the proportions of the preparation are sometimes varied.

SWITCHES FOR ROAD TRAMWAYS.—An invention, the object of which is to facilitate the change of line upon rails laid on common roads, has been provisionally specified by Messrs. Buck and Stein, of Great George-street, Westminster. Movable tongues are dispensed with by the substitution of inclined planes at the side of the flange, so that the wheel passes over, by the power being brought a little on one side.

WEST ROSEWARNE MINE.—At the Geological Society, Mr. H. C. Salmon, F.G.S., read a paper "On the Occurrence of some large Granite Boulders, at a great depth, in West Rosewarne Mine, Gwinear, Cornwall" The boulders of granite referred to were found in the 50 fm. level below the adit, the adit being 25 fms. from surface. One of the boulders was 4 feet 2 in. in diameter, and another 3 feet 10 in.; there were five other smaller boulders or pebbles also met with in the level. The boulders are in the killas close to the lode, and both the lode and the "country" near the lode are made up of brecciated killas. After quoting the details of somewhat similar phenomena formerly observed at the Relistian and Herland Mines, the author treated of the probable origin of the boulders in question; and although lodes are regarded by some as having been formed from below upwards, yet in this case the author thinks that the boulders must have had a common origin with the lode, and been introduced by a fissure from surface.

CORNISH PUMPING ENGINES.

MESSRS. FULLER AND HORSEY are instructed to SELL, BY PRIVATE CONTRACT, THREE GREAT CORNISH PUMPING ENGINES, made by Harvey and Co., the celebrated engineers, of Hayle, Cornwall, in 1854, and subsequently for the Old Wheal Vor Mine, situate about seven miles from the shipping port of Hayle. The diameters of the cylinders are 100 in., 85 in., and 80 in., with 11 ft. stroke, equal beam. The 100 in. cylinder makes on an average 5¾ strokes per minute; the quantity of water raised by each stroke is 16,266 gallons, or nearly 70,000,000 gallons in the twelve hours. The 85 in. cylinder makes 6½ strokes per minute, and raises about 60,000,000 gallons. And the 80 in. cylinder engine, which has never been worked, may be calculated in proportion. Attached to this engine there are TWO STEAM BOILERS, weighing about 12 tons each, of unusual strength.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, London, E.C. 78

STEAM ENGINES, BOILERS, &c., FOR SALE.—TWO 50 horse power HIGH PRESSURE DIRECT ACTING HORIZONTAL WINDING ENGINES, cylinders 24 in. diameter, 5 ft. stroke. These engines are quite new, and were made by Messrs. Daglish, of St. Helen's; they are fitted with the most improved Cornish valves, and provided with break gear.

Also,

A SET of HOLCROFTS and HOYLES PATENT MULTITUBULAR BOILERS for each of these engines, each set equal to 60 horse power, together with donkey engines, wrought-iron chimney, stays and foundation plate for ditto, which have never been made use of.

N.B.—The engines and boilers will be sold separately or together, at the option of purchasers.

Also,

FOUR VERTICAL PLANES for winding gear, 8 ft. diameter; and four head gear pulleys, with wrought-iron centres, complete, with pedestals, &c.

For further particulars and to view these articles, apply to GEORGE HARRISON, Esq., Canada Works, Birkenhead. 77

MERIONETHSHIRE.—GELLYGREIAN, ESGYR WYDDAN, and RHOSFARCH FARMS, on the estate of CHAS. FREDERICK THIRSTON, Esq., TO LET, for TRYING for LEAD ORE. There is a good lode runs through these farms, and in some places it is about 4 fms. wide, intermixed with carbonate of lime, gossan, and mundic; it runs two miles in the same land, and in a convenient place, 1¼ mile from the turnpike-road, and not far from a sea-port, and in a good place for driving levels along the lode.—Apply to C. F. THIRSTON, Esq., Talgarth; or to Capt. WM. WILLIAMS, Ponterwyd, near Aberystwith.

CARDIGANSHIRE.—A GOOD PLACE for TRIAL for LEAD ORE, on the property of Colonel POWELL, Nanteos. Two good lodes run in the east and west point. One of them the same lode as the Clara Mine. Close to the turnpike-road; and intermixed with an abundance of carbonate of lime, gossan, mundic, and black mineral.—Apply to Capt. WM. WILLIAMS.

PLYNLIMMON.—On the CROWN LAND, a GOOD PLACE for TRIAL, on the Goginan lode. Six miles from the turnpike-road, and eighteen miles from a sea-port. This lode, carrying good point, is composed of black mineral, and 12 in. wide of solid mundic. There was found some time ago a fine lump of lead ore, discovered with the floods of water.—Apply to Capt. WM. WILLIAMS. 80

NEW COLLIERY, NAILSEA, NEAR BRISTOL.—FOR SALE, BY PRIVATE CONTRACT, the WHOLE of the PLANT and MATERIALS at the above colliery, comprising—

ONE HIGH PRESSURE DIRECT ACTING PUMPING ENGINE, cylinder 45 in. in diameter, and 10 ft. stroke.
ONE HIGH PRESSURE WINDING ENGINE and gear, cylinder 12 in. diameter.
ONE HIGH PRESSURE WINDING ENGINE, cylinder 16 in. diameter.
THREE CYLINDRICAL BOILERS, 41 ft. by 6 ft.
ONE CYLINDRICAL BOILER, 18 ft. by 4 ft.
ONE CYLINDRICAL BOILER, 20 ft. by 3 ft. 6 in.
Hammered iron pumping cranks, T bobs, 19 in., 14½ in., 5¼ in., 5 in., and 4½ in. forcing, lifting, and hand pumps; hammered iron straps, double straps and tail joints, buckets, clacks, wrought-iron cistern, lifting screws, chains, large capstan, double-power crab winch, 80 fms. 10¼ capstan rope, 8 in. capstan and other ropes, blocks, boring tools, wrought-iron air pipes, tram plates, smiths' bellows and tools, wagons, carts, &c.

To view, apply at the colliery; and for all further particulars, to BODDAM CASTLE, Esq., No. 29, Corn-street, Bristol. 81

DERBYSHIRE.

THE ALDERWASLEY FORGE AND WORKS, NEAR THE AMBERGATE STATION ON THE MIDLAND RAILWAY.—TO BE LET, on a lease for 7, 14, or 21 years, and may be entered upon immediately, the above-mentioned FORGE and WORKS, with the STORE ROOMS, OFFICES and BUILDINGS, ROLLING and SLITTING MILLS, on the banks of the River Derwent, in the liberty of Alderwasley, and the WATER-WHEELS of 70 horse power and MACHINERY belonging thereto, late in the occupation of Messrs. Mold, who for nearly 50 years carried on a lucrative and extensive business as ironmasters at the said works, together with a newly-erected MESSUAGE, or DWELLING HOUSE, very pleasantly situated near the said works, with the green-house, stables, coach-house, and capital garden belonging thereto, and upwards of 30 acres of excellent land, and 15 workmen's houses and counting-house, near or contiguous to the works.

The works are situated within half a mile of the Ambergate station on the Midland Railway, and the Cromford and Belper turnpike-road, the branch railway from Ambergate to Rowsley (on which there is a siding and wharf for the use of the works), and the Cromford Canal (attached to which is a wharf also for the use of the works), are all parallel therewith and immediately contiguous thereto, and afford excellent railway and canal transit to and from London, Leeds, Nottingham, Derby, and all parts of the kingdom; and the extension of the railway from Rowsley to Buxton, now in progress, will give a direct communication with Manchester, Liverpool, &c.

The works are also available for saw-mills on an extensive scale, or for any other purpose requiring power and facility of transit.

For further particulars, and to treat, application may be made to Messrs. WOODHOUSE and JEFFCOCK, civil and mining engineers, Derby; or at the offices of Messrs. NEWBOLD and SON, solicitors, Matlock, from whom tickets may be obtained to inspect the works. 82

TO COAL OWNERS AND COKE BURNERS.

MACKWORTH'S PATENT COAL WASHER, OR PURIFIER.—This MACHINE will EXTRACT the SHALE and ALL HEAVY IMPURITIES from SMALL COAL at a COST of TWOPENCE PER TON.—For particulars and references, apply to the makers, A. and T. FRY, Temple-gate Works, Bristol; or to Mr. Jos. RIDER, Basinghall-street, Leeds. 83

CONDIE'S PATENT STEAM HAMMERS.—FIRST-CLASS "MOVING CYLINDER" STEAM HAMMERS, from 5 cwts. to 7 tons, suitable for jobbing forges, puddling forges, and the smiths' shops of engineers shipbuilders, &c. Pressure of steam required, 25 lbs.

BAIN AND WYLIE (Successors to John Condie),
Shields Ironworks, 330, Eglinton-street, Glasgow. 87

PATENT BITUMINIZED GAS, WATER, AND DRAINAGE PIPES.—These PIPES POSSESS all the PROPERTIES NECESSARY for the CONVEYANCE of GAS and WATER, and also for DRAINAGE PURPOSES—viz., GREAT STRENGTH, GREAT DURABILITY, and PERFECT INOXIDABILITY, and being non-conductors are not affected by frost, like metal pipes. They are proved to resist a pressure of 220 lbs. on the square inch (equal to 500 ft. head of water), are only one-fourth the weight, and considerably cheaper than iron pipes. They are made in 7 ft. lengths, and the joinings are simple and inexpensive. These pipes have been in use in France, Spain, and Italy nearly three years, where the demand for them is very great. The opinions of the press on a public test at the Houses of Parliament, before a large number of engineers and other scientific gentlemen, may be had, with further particulars, at the office of the company, on application to Mr. ALEX. YOUNG, 67, Mark-lane, London, where sample pipes may be obtained for trial. 85

INCRUSTATION OF STEAM BOILERS.—EASTON'S PATENT BOILER FLUID EFFECTUALLY REMOVES and PREVENTS INCRUSTATION in STEAM BOILERS, WITHOUT INJURY to the METAL, with GREAT SAVING in FUEL, and with LESS LIABILITY to ACCIDENT from EXPLOSION. It is used by Her Majesty's Steam Storeships, Woolwich Arsenal, Honourable Corporation of Trinity House, Tower of London, India Store Department, by the principal Steam Packet Companies of London, Liverpool, Southampton, Hull, &c., and by engineers, builders, railway companies, and manufacturers throughout the country. Testimonials from eminent engineers, boiler makers, and manufacturers, with full particulars, will be forwarded on application to P. S. EASTON and G. SPRINGFIELD, sole manufacturers and patentees, Nos. 37, 38, and 39, Wapping-wall, London, E.

AGENTS IN GREAT BRITAIN.

Aberdeen, Mr. James F. Wood.
Ashton-under-Lyne, Mr. S. G. Fielden.
Belfast, Mr. W. T. Matier, C.E.
Birmingham, Mr. Adam Dixon.
Chester, Mr. W. A. Rowland.
Devonport, Mr. Cornelius Boolds.
Dublin, Mr. Wm. Fith.
Frome, Mr. W. B. Harvey, Chemist.
Glasgow, Mr. W. Mutrie.
Hartlepool, Mr. W. T. Cheesman, West Hartlepool.
Hull, Messrs. A. L. Fleming and Co.
Leeds, Mr. J. C. P. Westwood.
Leicester, Mr. Benjamin Pochin.
Liverpool, Mr. J. McInnes.
Manchester, Messrs. Morris and Sutton, Princess Chambers.
Nottingham, Mr. G. D. Hughes.
Oldbury, Mr. C. Tonge, Chemist.
Southampton, Mr. Joseph Clark.
Southsea, Mr. T. Cheesman.
Tralee, Mr. H. Benner.
Wexford, Mr. Thomas Waring.

FOREIGN.

Rio de Janeiro, Messrs. Miers Brothers and Maylor, Engineers.
Odessa and South Russia, Mr. W. Baxter, Engineer, Nicolaeff.
Belgium, Messrs. Breuls Brothers, Engineers, Antwerp.
Holland, Mr. Jos. Courlander, the Hague. 86

ALBERT AND MEDICAL LIFE ASSURANCE, 7, WATERLOO PLACE, PALL MALL, LONDON, S. W.
ESTABLISHED 1838.

The business of the Medical, Invalid, and General Life Assurance Society having been amalgamated with the Albert Life Assurance Company, the united business will henceforth be carried on under the above title.

Accumulated fund exceeds	£500,000
Subscribed capital	447,180
Paid-up capital	137,000
Annual income from life premiums, upwards of	220,000

The new business is now progressing at the rate of more than £25,000 per annum.

From Prof. De Morgan's report upon the last valuation of liabilities (end of 1858), and the statements of accounts, it appeared at that time that the surplus in favour of the Albert business alone, after providing for every liability, was £192,925 2s. 11d.

HENRY WILLIAM SMITH, Actuary.
C. DOUGLAS SINGER, Sec. 84

GOVERNMENT OFFICIALS—REDUCTION IN SCALE OF PREMIUMS.

THE EUROPEAN ASSURANCE SOCIETY ISSUES POLICIES of GUARANTEE, at reduced rates, for officials in or under the Treasury Customs, Inland Revenue, Board of Trade, Poor-Law Board, Admiralty, and other public departments, and for bank and railway clerks and persons in commercial employments.

Further reductions on the combination of life assurance with guarantee. Annuities granted on favourable terms.

Forms and every information may be obtained at the chief office, No. 2, Waterloo-place, Pall-mall, London. 88

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE EAST PROVIDENCE MINE.

TO BE SOLD, pursuant to an Order made in a Cause of HOLLOW v. GIBBARD, dated the 2d day of April last, BY PUBLIC AUCTION, at the Registrar's Office, Truro, on Wednesday, the 26th day of June inst., at Twelve o'clock at noon precisely, 56 (4096ths) SHARES of the defendant, of and in the said MINE.

H. S. STOKES, Solicitor, Truro
(Agent for Messrs. Roscoria and Davies, Plaintiff's Solicitors, Penzance). 89
Dated Registrar's Office, Truro, June 11, 1861.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

In the Cause of BISHOP v. ROSKILLY.
IN RE HAMMETT CONSOLS MINE.

TO BE SOLD, pursuant to an Order made in the above-mentioned Cause, and dated the 18th day of August last, BY PUBLIC AUCTION, at HAMMETT CONSOLS MINE, in the parish of St. Neot, within the said Stannaries, on Monday, the 24th day of June inst., at Eleven o'clock in the forenoon, either together or in lots, the MINING MACHINERY and OTHER EFFECTS at and upon the said MINE and belonging thereto, or to the adventurers therein in respect thereof.

For viewing the same, application may be made to the officer of the Court in possession on the mine; or to Mr. H. S. STOKES, Solicitor, Truro
(Agent for Mr. R. Bishop, Plaintiff's Solicitor, Fowey). 90
Dated Registrar's Office, Truro, June 13, 1861.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

PURSUANT to an Order, or Decree, made in the Cause of SAMPSON AND ANOTHER v. UNSWORTH, the CREDITORS in respect of SOUTH LADY BERTHA MINE, in the parish of Buckland Monachorum, within the said Stannaries, are, on or before the 26th day of June inst., to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro, or in default thereof they will be peremptorily excluded the benefit of the said Decree.
Dated Registrar's Office, Truro, June 11, 1861. 91

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

PURSUANT to an Order, or Decree, made in the Cause of WEBBER v. GOYEN, the CREDITORS in respect of the DEVON GREAT WHEAL ELIZABETH MINE, in the parish of Widdicombe, within the said Stannaries, are, on or before the 26th day of June inst., to COME IN and PROVE THEIR DEBTS before the Registrar of the said Court, at his office in Truro, or in default thereof they will be excluded the benefit of the said Decree.
Dated Registrar's Office, Truro, June 11, 1861. 92

CARVANNALL MINE, GWENNAP.

MR. GREENWOOD has been favoured with instructions to SELL, BY PUBLIC AUCTION, at CARVANNALL MINE, early in June month, the following MACHINERY and MATERIALS, viz.:—

ONE PUMPING ENGINE, with TWO BOILERS.
ONE DRAWING ENGINE, with ONE BOILER.
Capstan and shears, about 200 fms. of pitwork, from 4 to 9 in., with workings, door-pieces, windbores all complete, with every other requisite for working a mine of this magnitude.

The whole will be found in complete order. Some of the materials have been delivered new within the last twelve months.

Full particulars will appear in handbills and future advertisements.
May 14, 1861. R. GREENWOOD, Auctioneer. 93

MOLD, FLINTSHIRE.

VALUABLE LEAD MINE, together with the powerful 80 horse STEAM ENGINE, PUMPS, LIFTS, PLANT, MACHINERY, and BUILDINGS.

MESSRS. MANSELL AND ELLIOTT are instructed to SELL, BY AUCTION, in One Lot, at Garraway's, Change-alley, Cornhill, on Wednesday, June 19, at One o'clock, by order of the mortgagee, the VALUABLE MINERAL PROPERTY known as the FRON ISA LEAD MINE, admirably situate in the best part of the famous lead-bearing district of Mold, Flintshire, together with the whole of the costly PLANT, MACHINERY, and BUILDINGS, including a powerful 80 horse STEAM ENGINE, PUMPS, LIFTS, &c., recently supplied, and in perfect working order.

Several shafts have been sunk, and the lode cut in the 40 and 50 fm. levels. The mine is in full work, and ore being raised, and there is a good prospect of another discovery by a slight further expenditure in the renowned flat of the district, which in the adjoining mines is now yielding so largely.

The mine is held at moderate royalties, and presents a fine opportunity for a mineral investment.

Particulars and conditions of sale may be obtained at the mine; at the Black Lion Hotel, Mold; of Messrs. NOKES and CARLISLE, 8, Finch-lane, Cornhill, E.C.; of Mr. S. J. GREEN, 113, Fenchurch-street, E.C.; and at the offices of Messrs. MANSELL and ELLIOTT, land agents and surveyors, 13A, Belgrave-square, S.W.; and 16, Cornhill, E.C. 94

The OLD ESTABLISHED GUNPOWDER MILLS, MAGAZINES, and WORKS, at EWELL, and WAREHOUSE at MORTLAKE, in SURREY; a MAGAZINE at BARKING, in ESSEX; and a MAGAZINE near CARDIFF, in WALES.

MESSRS. NASH are instructed by the proprietor to SELL, BY AUCTION, at Garraway's Coffee House, Change-alley, Cornhill, London, on Wednesday, June 19, at Twelve for One, in One Lot, all that VALUABLE ESTATE, the whole freehold except about 4 acres copyhold (land tax redeemed and rectorial and vicarial tithe rent charge free), situate at Ewell, comprising the old-established and well-known GUNPOWDER MILLS, MAGAZINES, ENGINE HOUSE, COMPOSITION HOUSES, CHARCOAL HOUSES, BOILING, DUSTING, and CORNING HOUSES, WHEELWRIGHT'S SHOP, COAL SHEDS, &c., together with fixed PLANT and MACHINERY.

Also the good RESIDENCE (brick-built and tiled), conveniently arranged OUT-BUILDINGS, including stabling for 20 horses, barns, cart sheds, cattle sheds, granary, carpenter's shop, and chaise-house; a large walled-in garden, pleasure grounds and shrubbery, together with ELEVEN COTTAGES (in the occupation of the operatives employed at the works), the area of the whole estate consisting of 73A. 1R. 2P. of capital arable, grass, and wood land.

Also the UNEXPIRED TERM of the LEASE of VALUABLE PREMISES situate at Mortlake, consisting of a warehouse, with ground and upper floors, each 51 ft. by 29 ft. 6 in., and known as CLARK'S WHARF, with frontage to the River Thames, free from wharfage dues, and at the south-east corner is a stable for two horses.

Also a most desirable FREEHOLD PROPERTY, situate at Barking, in the county of Essex (about one mile from the Creek), containing 2A., on which is erected a GUNPOWDER MAGAZINE, advantageously placed near the River Thames, and substantially built of brick and slated, containing two floors 50 ft. by 20 ft. each, from which extends a pier 130 ft. in length (timber built), communicating with the river, with tramway thereon and pent-house at the north end, and at the south end is a shed 10 ft. by 12, with folding doors at each side for loading and unloading into the river. There is also a cottage at some distance from the magazine, and detached out-buildings.

Also a VALUABLE LEASEHOLD PROPERTY for a long term, situate at Upper Boat, in the parish of Eglwysilan, about nine miles from the important town of Cardiff, containing 20P., on which there is another gunpowder magazine (stone built and slated), fenced in by a stone wall with roadway at the north end, communicating with and having a frontage of 60 ft. to the Glamorganshire Canal.

These well-known and long established mills have the great advantage of being worked entirely by water-power supplied from the river, which, after working the Ewell corn-mills, runs through the estate, having two falls, one for the upper and the other for the lower mills, and from ponds on the property, and being within an easy distance from two railway stations in communication with the metropolis, the south coast and west of England, they, taken in connexion with the surrounding estate, almost in a ring fence, and with the magazines and warehouses, offer very peculiar and unusual facilities for carrying on a large and lucrative business, and the whole gives to a purchaser the opportunity of a highly advantageous investment either for trade or occupation.

The whole of the machinery and fixtures in the mills and upon the premises will be included in the purchase.

Particulars, with plans, may be had at Garraway's Coffee-house, Change-alley, E.C.; at the *Midland Counties Herald* office, Birmingham; at *Swansea Herald* office, Swansea; at the office of the *North British Advertiser*, Edinburgh; and, with cards to view, of Mr. GARDENER, at Ewell; of Messrs. WENTWORTH and SON, engineers, Wandsworth, Surrey, S.W.; of Mr. CLARK, 35, St. Swithin's-lane, E.C; of Messrs. COULTHURST, solicitors, New-inn, Strand, W.C.; of Mr. ALEXANDER BASSETT, mineral estate agent, Church-street, Cardiff; and of Messrs. JOSEPH and JOHN NASH, land agents, valuers, and auctioneers, Reigate, Surrey. 95

SOUNDWELL COLLIERY, GLOUCESTERSHIRE, FOUR MILES FROM BRISTOL.

MR. G. F. DIX WILL SELL, BY AUCTION, at the Black Horse Inn, Kingswood Hill, on Monday, the 1st of July, the following capital ENGINES:—

LOT 1.—WATER ENGINE, 200 horse power, 76 in. cylinder, 9 ft. stroke, complete, with engine house.

LOT 2.—WINDING ENGINE, 18 horse power, 24 in. cylinder, 5 ft. stroke, 8 ft. drum, spur wheel and shaft, complete, with engine house.

LOT 3.—WINDING ENGINE, 24 horse power, 24 in. cylinder, 6 ft. stroke, 7 ft. drum, spur wheel and shaft, complete, with engine house.

The sale will commence at Six o'clock.

The whole, or either lot, may be treated for by private contract, by applying to the Auctioneer, Kingswood Hill, Bristol. 96

CORNWALL.

The very VALUABLE ESTATE and FARM of TREGULLAND, in the PARISH of ST. CLEATHER, heretofore known as SALTER'S TREGULLAND and LOWER TREGULLAND, situate nine miles from Launceston, six from Camelford and Boscastle, and 15 from Bodmin, Callington, and Liskeard, and bounded in part by the River Inney, a favourite trout stream.

MESSRS. KEMP have received instructions to SELL, BY AUCTION, at the Mart, Bartholemew-lane, London, on Friday, July 5th, at Twelve for One o'clock, the above very excellent and compact ESTATE, comprising a DWELLING HOUSE, labourer's COTTAGE, and all convenient FARM BUILDINGS, and 411A. 1R. 17P. of very superior PASTURE, MEADOW, and ARABLE LAND, in a ring fence, and possessing valuable common rights. An iron mine of the highest quality has recently been developed on the premises.

The eastern division of Cornwall is now becoming a mining district; rich lodes of copper and lead have been found there. The attention of capitalists may not be unprofitably bestowed in that direction.

About 123 acres are freehold, and about 288 acres are held for 1000 years, from 1639.

Mr. AARON STEPHENS, who holds the estate at £300 per annum, will show it, and for further particulars and plans apply to Messrs. KEMP, land agents and surveyors, at 37, Judd-street, Brunswick-square, W.C., and 161, Albany-street, Regent's-park, London, N.W.; to B. SOADY, Esq., Gurrington, Ashburton; to Messrs. GREGORY, SKIRROW, ROWCLIFFE, and ROWCLIFFE, solicitors, 1, Bedford-row, London; or to Messrs. TUCKER and SON, solicitors, Ashburton, Devon. 97

RIDSDALE ESTATE, NORTHUMBERLAND.—POSTPONEMENT of SALE.—Notice is hereby given, that the SALE of the above ESTATE, advertised to take place at the Turk's Head Inn, Newcastle-on-Tyne, on Monday next, the 17th inst., is POSTPONED.
June 12, 1861. WILLIAM J. YOUNG, Solicitor, Sunderland. 98

Landed Estates Court, Ireland.

In the Matter of the Estate of JOHN FLEMING, Trustee of the Estate of WILLIAM CURRY, a bankrupt; CHARLES GARDINER, Trustee of the Estate of ADAM KILGERNA, bankrupt; ALEXANDER RANKINE, Trustee of the Estate of CHAS. MAJOR HERBERTA, bankrupt; and PATRICK BUCHAN, Owners. *Exparte* JOHN BRIDGES, Petitioner.

THE HON. JUDGE LONGFIELD, L.L.D., one of the Judges of the Landed Estates Court, will, on Thursday, the 4th day of July, 1861, at the Landed Estates Court, Four Courts, Dublin, SELL, in One Lot, the extensive IRON MINES and WORKS upon and under the townlands of TULLYNAMOYLE and GOWLANE, situate in the BARONY of DROMAHAIKE and COUNTY of LEITRIM, and the several BUILDINGS, MACHINERY, FURNACES, and ENGINES connected therewith, known as the CREEVELEA IRONWORKS, together with the several COAL FIELDS or COLLIERIES under the several towns and lands of CORRY MOUNTAIN, MONEENATIEVE, an UNDIVIDED MOIETY of ALTAQUIN, and SELTONASKEAGH, all situate in the said Barony of Dromahaire and County of Leitrim; and under the town and lands of TULLYNAHA, otherwise TULLYNAHOW, situate in the BARONY of BOYLE and COUNTY of ROSCOMMON.

The IRON MINES and WORKS of CREEVELEA are held under an indenture of lease, bearing date the 24th day of June, 1853, for a term of 31 years, from the 29th September, 1851, subject to certain royalty rents therein specified, or a fixed rent of £500 a year in lieu thereof.

The several COAL FIELDS or COLLIERIES are held under leases, bearing date respectively 9th April, 1853; 9th April, 1853; 30th August, 1853; 16th November, 1852; and 14th September, 1853; all for terms of 31 years, with the exception of the lease of the 16th November, 1852, and 9th April, 1853, of the Seltonaskeagh and Moneenatieve Collieries, which are for terms of 21 years only; and these coal fields are subject to certain royalty rents of 2d. per ton for coal (culm excepted), or fixed rents in lieu thereof, amounting in all to £139 10s. per annum. Immediate possession of all can be had.
Dated 10th day of June, 1861. RICHARD H. V. ARCHER, Chief Clerk.

For particulars as to the several buildings, machinery, furnaces, &c., upon the several premises above described see previous advertisement and printed rentals.

The Creevelea Ironworks are situate in the barony of Dromahaire and county of Leitrim, three and a half miles distant from the town of Drumkeerin.

For rentals and further particulars, apply to the Landed Estates Court, Four Courts, Inns Quay, in the City of Dublin; Messrs. BRIDGES and SON, 23, Red Lion-square, London; ANDREW D. JOHNSTON, Esq., Creevelea, Carrick-on-Shannon, who will show the property to intending purchasers; or to Messrs. GALLOWAY and CONNOR, solicitors for petitioner, having carriage of the proceedings, 35, North Cumberland-street, Dublin. 9

In Chancery.

TO BE SOLD, pursuant to a Decree of the High Court of Chancery, made in a Cause of WILD v. MILNE, with the approbation of the Master of the Rolls, in Five lots, by Mr. WILLIAM HENRY FLETCHER (the person appointed by the said Judge), at the Angel Inn, at Oldham, in the county of Lancaster, on Wednesday, the 26th day of June, 1861, at Six o'clock in the evening precisely,

All those VALUABLE LEASEHOLD and FREEHOLD COAL MINES and COLLIERIES, situate in the townships of Crompton, Thornham, and Castleton, in the county of Lancaster, known as the DEAN COLLIERY, including the HANGING CHADDER PIT, the DEAN PIT, the HOLLOWS PIT, the LOW CROMPTON PIT, and the HATHERSHAW MOOR PIT, and with the BRICK GROUND thereto belonging.

And also IMPLEMENTS, ENGINES, MACHINERY, FIXTURES, and OTHER EFFECTS on or in the said DEAN COLLIERY.

And also certain FREEHOLD and LEASEHOLD MESSUAGES and PREMISES, situate at Gravel Hole and Snipe Leach, in the township of Thornham aforesaid, and Burnedge, in the township of Castleton aforesaid, and which mines, collieries, and effects, and messuages and premises, are now in the possession of the Dean Colliery Company.

To view the collieries, and for printed particulars, application to be made to Mr. WILLIAM HENRY FLETCHER, of Oldham, the auctioneer; Mr. SAMUEL WILD, Dean House, near Rochdale; Mr. EDWIN HASLAM, Buersil Head, near Rochdale, book-keeper; Messrs. SHARPE, JACKSON, and PARKER, solicitors, 41, Bedford-row, London; Mr. JAMES HARTLEY, solicitor, Rochdale; Mr. F. F. JEYES, solicitor, 22, Bedford-row, London; Mr. JAMES LORD, solicitor, Rochdale; Messrs. JOHNSON, WEATHERHALL, and SON, 7, King's Bench Walk, London; and to Messrs. HOLGATE and W. and T. ROBERTS, solicitors, Rochdale.

Such plans of the mines as are in the vendor's custody will be produced at the time of sale. Plans will also be annexed to the particulars and conditions of sale.

Messrs. HOLGATE and W. and T. ROBERTS, solicitors, Rochdale, will, on application, produce the leases and agreement, as also the indenture referred to in the conditions of sale, or copies of the same instruments respectively, at their office, in John-street, Rochdale. 10

In Chancery.

In the Matter of the Joint-Stock Companies Winding-up Acts, 1848, 1849, and 1857, and of the Great Western Coal Company.
COLLIERY FOR SALE.

TO BE SOLD, BY AUCTION (by Order of the Judge to whose Court this matter is attached), by Mr. THOMAS FISHER ABBOTT (firm of Barnard, Thomas and Co.), at the GREAT WESTERN COAL COMPANY'S WORKS, in the parish of St. Philip and Jacob, Bristol, on Tuesday, July 2, 1861, at Eleven o'clock in the forenoon, in One, or, if not sold in One Lot, then in Lots subject to conditions to be then produced.

The whole of the PLANT, MACHINERY, and IMPLEMENTS, including a CONDENSING ENGINE of 30 horse power, with WINDING and PUMPING APPARATUS complete, weighbridge, pumps, ropes, tackle, capstans, tools, implements, and all the requisite gear for carrying on the business of an extensive colliery.

The premises are held under two mining leases, which are not assignable without license, but the lessors have notified through their solicitors their willingness to accept a responsible purchaser as lessee, and the vendor is willing to concur in the surrender of the existing leases in favour of such purchaser.

This colliery has been but partially worked, but it is known to abound in several valuable veins of coal, blackband, and clay iron ore, and a large tract of land in addition to that comprised in the leases is obtainable.

The lenses, with the letters before referred to, will be produced, together with a plan of the working, at the sale, and may be inspected previously to the day of sale, on application to Mr. JACOB STRICKLAND, solicitor, All Saints'-court, Bristol.

Printed particulars and conditions of sale may be had gratis of the said Mr. STRICKLAND; of Messrs. HENRY BRITTAN and SON, solicitors, Small-street, Bristol; of Mr. GEORGE H. JAY, the Official Manager, 3, Moorgate-street, London; of Mr. STEVENS FRIPP, solicitor, 2, Dane's Inn, St. Clement's, Strand, London; or the Auctioneers, Albion Chambers, Bristol.—June, 1861. 10

In the Matter of the Joint-Stock Companies Act, 1856 and 1857, and of the Liverpool and Pwllheli Granite Company (Limited).
TO CONTRACTORS for PUBLIC WORKS, STONE MERCHANTS, and OTHERS.
VALUABLE GRANITE QUARRIES, PWLLHELI, CARNARVONSHIRE.

MR. BRANCH WILL SELL, BY AUCTION, on Tuesday, the 25th inst., at Half-past One for Two o'clock in the afternoon precisely, at the Clarendon Rooms, South John-street, Liverpool, subject to conditions of sale, all the ESTATE and INTEREST of the LIVERPOOL AND PWLLHELI GRANITE COMPANY (LIMITED) of and in all that tract of LAND and all those GRANITE ROCKS and QUARRIES, known as the GIMBLET ROCK, situate at the entrance of the harbour of Pwllheli, in the county of Carnarvon, with the wharf or shipping place, sheds and buildings there erected, and all and singular the cranes, wagons, rails, plant, and tackle in and about the said quarries and premises.

On having a surrender of the existing lease, the Right Hon. the Lord Newborough, the owner in fee, will grant a lease to an approved purchaser for a term of 21 years, at a minimum fixed rent of £40 per annum, redeemable by a royalty of 2s. per ton of stone, made merchantable in any year, when such royalty shall amount to a sum exceeding £40. The winding-up of the Liverpool and Pwllheli Granite Granite Company was rendered necessary by misunderstanding arising between two classes of shareholders.

The granite is of superior quality. Vessels can come alongside the quarries and be laden without any land carriage. Freights are low, labour is cheap, and the demand abundant.

For further particulars, apply to Messrs. POWELL and POWELL, solicitors, Carnarvon; to Messrs. TOWNSEND and JACKSON, solicitors, Liverpool; Messrs. LITTLEDALE, RIDLEY, and BARDSWELL, solicitors, Liverpool; or to JOHN and HENRY GREGORY, 3, York-buildings, Dale-street, Liverpool, solicitors to the Official Liquidator. 11

CORNWALL.
WHEAL ST. ANDREW MINE, NEAR HAYLE.

MESSRS. WARE AND SON WILL SELL, BY AUCTION, on Tuesday, the 2d day of July, all the VALUABLE MACHINERY and MATERIALS on the above mine. See future advertisements for particulars.
Dated Exeter, June 13, 1861. 10

LOW DALE HOUSE AND FARM, WHITBY, YORKSHIRE.

TO BE SOLD, OR LET, with immediate possession if required, all that SEAT or RESIDENCE known as LOW DALE HOUSE, with the FARM, situate and being three miles from the fashionable watering town of Whitby, and within a short distance of Sleights station on the North-Eastern Railway.

The freehold estate is in a ring fence, bounded by an excellent front stream, and containing 48 acres of rich arable, meadow, and pasture land, drained, and in a good state of cultivation. The residence, outbuildings, and farmstead, with green-houses, hot-houses, fruit and pleasure gardens, were recently erected and laid out by the present owner, at a large expense, on approved plans, and of the best materials.

The property contains the rich bands of IRONSTONE and IRON ORE, with other minerals peculiar to the Cleveland district, and which is pre-eminently adapted for the erection of blast-furnaces and ironworks. There is also an unlimited right of turbary and stray upon the unenclosed neighbouring moors.

To a purchaser or tenant requiring early possession, the farm can be had along with the residence and gardens, or the latter can be taken separately.

For full particulars and information, apply to Mr. JOSEPH THOMPSON, agent, Whitby.
June 8, 1861. 10

TO MINING COMPANIES.

HAM IRON AND MANGANESE MINES.—TO BE LET, for a term of years, ONE HUNDRED AND TWENTY-SEVEN ACRES of LAND, containing VALUABLE IRON ORE, RED and BROWN HEMATITE, and MANGANESE. The estate is situate at Ham, which is distant about 1½ mile from Shepton Mallet, and 3¼ miles from the City of Wells.

The lessee will have to bear the expenses attendant on an application to the Court of Chancery to sanction a lease of the mines under the Settled Estates Act.

For all further particulars apply to Messrs. PHIPPS and MACKAY, solicitors, Shepton Mallet, Somerset. 10

FOR SALE, the BRYNGLAS SILVER-LEAD MINE, situate near Ponterwydd, and about three miles from the Devil's Bridge, and twelve miles from the port of Aberystwith, Cardiganshire.

The above mine has been worked by the present proprietors for nearly three years, and the machinery for pumping, crushing, and dressing the ore is of the very best description, and in perfect working order.

Upwards of £5000 has been expended in the erection of the machinery and the development of the mine. The shaft is sunk 26 fms. In the level in the bottom the lode is worth from 15 to 20 cwts. per fm. The lode in the 20 fm. level is also worth from 15 to 20 cwts. per fm. There is an abundant supply of water, and the royalty is moderate.—For further particulars, apply to the Secretary, at the offices, Claremont Hill, Shrewsbury. 10

BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK of SECOND-HAND MINING MATERIALS FOR SALE, including ironwork for a water-wheel, 40 ft. diameter, 2½ ft. breast. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description. 107

PATENT LEVER BREAK, FOR RAILWAY WAGONS, doing away with the objectionable break rack. Can be APPLIED to EXISTING STOCK at a TRIFLING EXPENSE. Royalty moderate. Models can be seen at 34, Great George-street, Westminster; and the breaks in action at the works of the Railway Carriage Company; at the Peterboro' Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taff Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent. 108

HALL AND WELLS, PATENTEES AND MANUFACTURERS OF SUBMARINE TELEGRAPH CORES, CABLES, &c.—TELEGRAPH CONDUCTORS INSULATED with INDIA RUBBER at £5 per mile and upwards. CORES WARRANTED to STAND the USUAL TEST for INSULATION. Further particulars as to price of cores, cables, &c., can be had on application at 60, Aldermanbury, City, E.C.; and Steam Mills, Mansfield-street, Borough-road, Southwark, S.E.

Copper wire covered with silk, cotton, or any other material, to order. 109

EBONITE!—TELEGRAPH INSULATORS made of EBONITE. EBONITE in SHEET, TUBES, and RODS, or manufactured into various articles of utility and ornament, being calculated to supersede metal, hard woods, and ivory at present in use.

INDIA RUBBER.—INDIA RUBBER STEAM PACKING in ROPE, SHEET, RINGS, &c., intended for railway and machinery appliances, unvulcanised and vulcanised.

S. W. SILVER AND CO., 3 and 4, BISHOPSGATE WITHIN, E.C. 110
(Opposite the London Tavern).

WORKS—SILVERTOWN, ESSEX, opposite Her Majesty's Dockyards Woolwich.

SARL AND SONS, 17 and 18, CORNHILL, respectfully SOLICIT a VISIT to their magnificent ESTABLISHMENT. The ground floor is more particularly devoted to the display of FINE GOLD JEWELLERY, GOLD and SILVER WATCHES, and FINE GOLD CHAINS.

The SILVER PLATE DEPARTMENT is in the gallery of the building, and consists of every article requisite for the table and sideboard.

In the magnificent show-rooms is displayed a large and beautiful stock of ARGENTINE PLATE, the manufacture of which has stood the test of 20 years' experience.

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SARL AND SONS, 17 and 18, CORNHILL, LONDON. 111

BASTIER'S PATENT CHAIN PUMP, APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion The following statement presents some of the results obtained by this hydraulic machine as daily demonstrated by use:—

1.—It utilises from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
3.—It occupies a very small space.
4.—It raises water from any depth with the same facility and economy.
5.—It raises with the water, and without the slightest injury to the apparatus sand mud, wood, stone, and every object of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or attention.

To be seen daily at W. P. Warner's, wine and spirit merchant, Welsh Harp, Edgware road, near Cricklewood. References of the highest character will be given.

J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors and others, for the USE of his INVENTION.

OFFICES, 19, MANCHESTER BUILDINGS, WESTMINSTER, LONDON. 112
London, Oct. 10, 1859. Hours, from Ten till Four. J. U. BASTIER, C.E.

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WHITE STAR EX-ROYAL MAIL CLIPPERS,
SAILING FROM
LIVERPOOL to MELBOURNE on the 1st and 20th of every month.
FOR MELBOURNE.

Ship.	Captain.	Register.	Burthen.	To sail.
EMPIRE OF PEACE	CALVERT	1540	4600	June 25.
PRINCE OF THE SEAS	BROWN	1316	4000	July 20.
BLUE JACKET	WHITE	1559	4750	August 20.

Owing to the tides, the June packet will sail on the 25th.

The clippers of this line are the largest, finest, and handsomest in the trade, and are well known for their famous passages, and the unswerving punctuality of their sailing engagements. Passengers must embark, without fail, on the day previous to advertised date.—For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GRINDLAY and Co., 124, Bishopsgate-street, and 55, Parliament-street; or SEYMOUR, PEACOCK, and Co., 116, Fenchurch-street, London.

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SAMUEL GRIFFITHS' STAFFORDSHIRE IRON TRADE CIRCULAR. Published every Saturday afternoon. Circulation, 7000 per week. Price £1 1s. per annum, in advance, post free, being registered for transmission abroad at same price.

The IRON CIRCULAR gives the state of the Market with respect to Pig and Malleable Iron; the Official Prices of Bars, Hoops, Sheets, and most other kinds of Staffordshire Iron; a Report of the Iron Trade throughout England, Scotland, and Wales; the Scotch Pig Market up to the close of the market on the day of publication; the Closing Price of the Funds and the principal Railway Stocks up to two o'clock the same day; a Monthly Report of the Iron Trade in France; a Weekly Report of the Money Market, London Discount Market, state of the Foreign Exchanges; the Weekly Return of the Bank of England; the Monthly Return of the Bank of France; a correct Weekly Account of all the Gold Ships at Sea, London bound; likewise an accurate Weekly Return of all the Gold and Specie received during the week; a Report of the Copper Market, with prices of all kinds; a Report of the Tin Market, with present prices, and the same of Lead and Spelter, every week. The IRON CIRCULAR likewise contains an account of all Failures, Dissolutions of Partnerships, Changes in Firms, Stoppage of Works, Works Recommencing, New Works, or those in course of erection; in a word, the CIRCULAR gives every information connected with the Iron Trade which Mr. GRIFFITHS, whose well-known connection with it, considers would be useful and acceptable to the Ironmaster, the Merchant, the Shipper, Banker, or any other Buyer of Iron. The same may be said with regard to Copper, Tin, Spelter, and Lead. A Tabular Statement will be published with the CIRCULAR every three months, showing the number of Furnaces in and out of blast in all the Iron Districts, the quantity of Iron made, and likewise the quantities of Coal and Ironstone consumed in its production. 116

Parties wishing to subscribe will send a post-office order, addressed to S. GRIFFITHS, Metal Broker, Wolverhampton, which will include the cost post free to end of this year.

INVESTMENTS IN BRITISH MINES.—MR. MURCHISON publishes a QUARTERLY REVIEW OF BRITISH MINING giving at the same time the POSITION and PROSPECTS of the MINES at the end of each Quarter, the DIVIDENDS PAID, &c.; price One Shilling. RELIABLE INFORMATION and ADVICE will at any time be given by Mr. MURCHISON, either personally or by letter, at his Offices, No. 117, BISHOPSGATE-STREET WITHIN, LONDON, where copies of the above publication can be obtained.

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With such a work in print, it would be gross neglect in an investor not to consult it before laying out his capital.—*Poole Herald.*

Every person connected, or who thinks of connecting himself, with mining speculations should possess himself of this book.—*North Wales Chronicle.*

A very valuable book.—*Cornwall Gazette.* [*Glasgow Examiner.*

All who have invested, or intend to invest, in mines should peruse this able work. Is deserving the attention of every one who seeks profitable investment of his capital.—*Brighton Examiner.* 117

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BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS.
IN STOCK—FOR SALE OR HIRE. 117

THE RAILWAY CARRIAGE COMPANY, OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.
NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK FOR SALE OR HIRE.
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Apply to the SECRETARY, 3, Newhall-street, Birmingham. 119

JAMES RUSSELL AND SONS, CROWN TUBE WORKS, WEDNESBURY, STAFFORDSHIRE.
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The Original Inventors and First Manufacturers of the Patent Wrought-Iron Tubes for Gas, Steam, Water, &c. Enamelled Tubing, and Glazed ditto. Russell and Howell's Homogeneous Tubes. And agents for G. F. Muntz's Solid Brass Tubes. Every variety of fittings. Trade mark, 120

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MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS.
IMPROVED HOMOGENEOUS METAL TUBES.
ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANISED AND ENAMELLED.
GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c. 121

FARRAR'S PATENT STEEL COMPANY, WARDSEND STEEL WORKS, SHEFFIELD, MANUFACTURERS of BEST CAST STEEL, MALLEABLE and MILD STEEL CASTINGS, SUPERIOR CAST-STEEL FILES, &c., CALL the ATTENTION of ENGINEERS and all users of FIRST-CLASS STEEL to the GREAT SUPERIORITY of STEEL MANUFACTURED under this PATENT. Prices:—

First quality	£50 per ton.
Second quality	40 "
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Where all communications are to be addressed. 122

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60, Conduit-street, London, W. 123

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LESLIE'S PATENTS: THE NATIONAL WASTE HEAPS AT COLLIERIES UTILISED FOR GAS PURPOSES.
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SHORTRIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS of HOWELL'S PATENT HOMOGENEOUS METAL PLATES for BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING the STRENGTH of STEEL with the MALLEABILITY of COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTRIDGE, HOWELL, and Co., Hartford Steel Works, Sheffield; or Messrs. HARVEY and Co., 12, Haymarket, London. 127

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of PROF. DEVILLE'S METHOD of PRODUCING PURE ALUMINIUM, they are now in a POSITION to SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860. 128

CORNISH BORER STEEL.—Upwards of ONE HUNDRED AND SIXTY MINES are SUPPLIED with this STEEL, and the DEMAND for it is RAPIDLY INCREASING.—For terms, apply to R. MUSHET and Co., Forest Steel Works, near Coleford, Gloucestershire.
London Agent:—Mr. W. T. HENDRY, 71, Cannon-street West, E.C. 129

TO IRONFOUNDERS.—J. IRELAND, FOUNDRY ENGINEER, begs to CALL the ATTENTION of IRONFOUNDERS to his PATENT UPPER TUYERE CUPOLA FURNACE, which EFFECTS a SAVING of from THIRTY to FIFTY PER CENT. in cokes, and melts the metal in much less time, without any additional labour or expense. Full particulars and testimonials can be had upon application at his office, 21, Moreton-street, Strangeways, Manchester. 130

IMPORTANT TO THE IRON TRADE.—By the AID of J. BROAD'S PATENT APPARATUS for ECONOMISING COAL and OTHER FUEL in BLAST FURNACES, EVERY AVAILABLE PARTICLE of SMALL FUEL MAY BE so USED as to be nearly equal in efficiency to large coal and coke.—17, Belgrave-terrace, Villa-road, Handsworth, near Birmingham. 131

GARNOCK, BIBBY, AND CO., MANUFACTURERS OF HEMP AND MANILLA CORDAGE, AND IMPROVED PATENT NON-TWISTED WIRE-ROPE, CHAPEL STREET, LIVERPOOL.

G. B. & Co. beg to intimate that they use nothing but Bradley's long-drawn charcoal wire in the manufacture of pit and incline ropes. The quality of this article is well-known, and its superiority was fully proved at a PUBLIC TEST of WIRE ROPE, instituted by Messrs. R. S. Newall and Co., at Liverpool, on October 29th, 1860, on which occasion G. B. and Co.'s samples averaged 13 per cent. over their trade card, and were the strongest of all the samples from various manufacturers then tested.—See *Mining Journal*, Oct. 29, 1860. 132

HEMP AND WIRE-ROPES.

JOHN STEPHENS AND SON, HEMP AND WIRE-ROPE WORKS, ASHFIELD, FALMOUTH, CORNWALL,
MANUFACTURERS of FLAT and ROUND HEMP and WIRE-ROPES, GUIDE RODS for SHAFTS, GALVANISED WIRE SIGNAL LINE and STRAND FENCING, &c., for MINES, RAILWAYS, &c.
A first-class medal was awarded to JOHN STEPHENS and SON for their manufactures, by the Royal Cornwall Polytechnic Society, in 1860. 133

BEST CHARCOAL IRON AND STEEL WIRE ROPES, FOR COLLIERIES, MINES, &c.
COPPER ROPE LIGHTNING CONDUCTORS, with fittings complete.
WEIGHING MACHINES and WEIGH BRIDGES.
GALVANISED CORRUGATED IRON ROOFS, and IRON BUILDINGS.
Reduced price list, with estimate and designs, forwarded on application to FRANCIS MORTON AND CO.,
MANUFACTORY AND HEAD OFFICES,—LIVERPOOL.
LONDON OFFICE,—19, PARLIAMENT STREET, WESTMINSTER. 134

TO COLLIERY PROPRIETORS.—PATENT TIPPING MACHINES, TO DIMINISH THE LOSS FROM BREAKAGE IN LOADING COAL ON RAILWAY WAGONS, SHIPS, &c.
ARTHUR AND JAMES RIGG, PATENTEES AND MAKERS, GEORGE STREET, CHESTER. 135

VENTILATION OF MINES.—ELLIS LEVER INVITES the ATTENTION of OWNERS, VIEWERS, and MANAGERS of COLLIERIES to his recently IMPROVED MATERIAL for BRATTICING and MAKING TRAP DOORS, in the working of coal mines. It is made in every width, and in various qualities, prices of which may be had on application.

For the VENTILATION of SHAFTS, and for CONVEYING AIR to the various UNDERGROUND WORKINGS of MINES, ELLIS LEVER has contrived and introduced a VERY SERVICEABLE DESCRIPTION of WATER-PROOF and AIR-PROOF TUBES, from 1 to 6 ft. diameter, and in unlimited lengths.

Further information may be had on application to the manufacturer, ELLIS LEVER, West Gorton Works, Manchester.

"THE RAILWAY AND THE MINE."—LEVER'S Illustrated Year-Book for 1861, price 2s. 6d., may be had in London of Simpkin, Marshall, and Co., and all booksellers throughout the kingdom. 136

PATENT SAFETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH DAVEY, and PRYOR who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which, being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder.

This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.

Address,—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall. 137

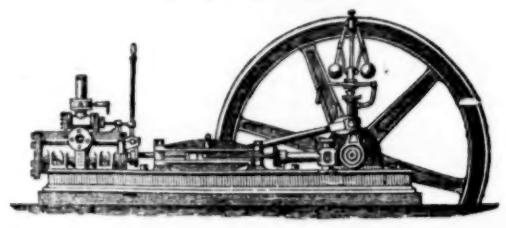
MESSRS. W. BRUNTON AND CO. have great pleasure in informing their customers and friends, and the mining community, that they have RESUMED MANUFACTURING, at their PENHELLICK WORKS, POOL, near CAMBORNE, and are PREPARED as before to SUPPLY SAFETY FUSE of a QUALITY which CANNOT BE SURPASSED.
BRANCH WORKS, BRYMBO, NEAR WREXHAM. 138

AYTOUN'S PATENT SAFETY CAGE FOR MINES.—An illustrated description of this cage appeared in the *Mining Journal* of the 8th June. The patentee would impress on the working miners that it depends upon themselves alone whether they are to have the security of safety cages or not. Employers are naturally unwilling to incur this responsibility, but will gladly accede to the expressed wishes of their workmen in a matter so materially affecting their safety. Let the latter, therefore, with the concurrence of their employers, call upon the different patentees to exhibit their safety cages before them, make choice of the one they have confidence in, and thus do away with a fruitful source of danger to the miner.

N.B.—If requested to do so, the patentee will send a safety cage, with its guide-rods and frame complete, to any mining district, at his own expense, for the purpose of its being tried and tested. He has no doubt that the other patentees will do the same.

Apply to the patentee, ROBERT AYTOUN, 3, Feites-row, Edinburgh. 139

MESSRS. E. PAGE AND CO.,
VICTORIA WORKS, BEDFORD,
AND LAURENCE POUNTNEY PLACE, CANNON STREET, LONDON
MANUFACTURERS OF

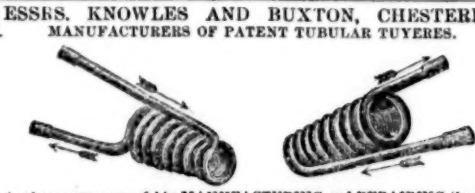


HIGH PRESSURE STEAM ENGINES, from 2½ to 30 horse power, and upwards, adapted for MILLS, AGRICULTURAL, MINING, and GENERAL PURPOSES. The following sizes are ready for immediate delivery, and may be seen at any time at their London depôt:—

ONE 5 in. cylinder, 10 in. stroke.	ONE 12 in. cylinder, 36 in. stroke.
TWO 8 in. cylinder, 18 in. stroke.	ONE 14 in. cylinder, 36 in. stroke.
ONE 10 in. cylinder, 18 in. stroke.	ONE 17 in. cylinder, 36 in. stroke.
ONE 14 in. cylinder, 24 in. stroke.	TWO 20 in. cylinder, 36 in. stroke.

Prices and full particulars sent on application. 140

MESSRS. KNOWLES AND BUXTON, CHESTERFIELD
MANUFACTURERS OF PATENT TUBULAR TUYERES.



Having been very successful in MANUFACTURING and REPAIRING the PATENT TUBULAR TUYERES, and securing our patent for a further term of years, we have great pleasure in offering them to the public, at a considerable REDUCTION IN PRICE.

Our manner of repairing will make them as LARGE and GOOD AS WHEN NEW (which is not the case with the ordinary tuyere) for half the first cost, when there is not more than two coils destroyed at the nozzle, all parties returning them carriage paid, and are confident they will be the cheapest and best ever offered to the mining world.

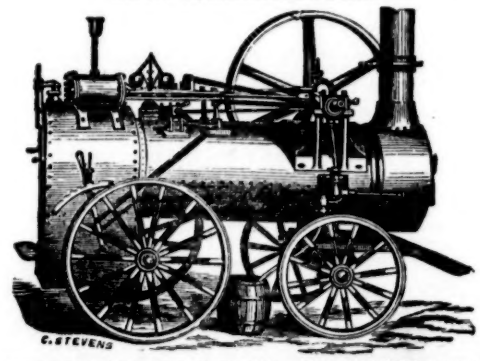
The PATENT TUBULAR TUYERES having maintained a most honourable reputation since their introduction, and been thoroughly proved to answer all the purposes set forth by the proprietors (when properly treated), it is, therefore, deemed unnecessary to publish a list of the patrons, or enumerate cases of their success. Although by such a procedure very much might be said in their favour, yet the readers would never be so fully convinced of their sterling worth as by a practical trial.

The future scale of prices will be as follows, including sockets:—

No. 1 Tuyere, 16 in. long			28s. each.
No. 2	" 18	"	32s. "
No. 3	" 20	"	36s. "
No. 4	" 22	"	40s. "
No. 5	" 24	"	44s. "

Delivered at Chesterfield station. Terms, nett cash quarterly. 141

PORTABLE STEAM ENGINE COMPANY (LIMITED).
CITY OFFICE, 5, ADAM'S COURT, OLD BROAD STREET.
DEPOT,—92, BLACKFRIARS ROAD.



PATENT PORTABLE STEAM ENGINE, WITH REVERSING GEAR.
PORTABLE STEAM ENGINES LENT ON HIRE, from 4 to 25 horse power.
Every information can be obtained on application to Mr. DUNSFORD, at the City office or to Mr. CRESSWELL, the company's engineer, at the depôt. 142

TO BRASSFOUNDERS, ENGINEERS, REFINERS, &c.—The PATENT PLUMBAGO CRUCIBLE COMPANY beg to CALL the ATTENTION of all users and shippers of melting pots to the GREAT SUPERIORITY of the PATENT CRUCIBLES, which have been used during the last three years by some of the largest melters in England and abroad. In addition to their capabilities of melting an average of from 35 to 40 pourings, they are unaffected by change of temperature, never crack, but can be used till worn out, requiring only one annealing for several days' work, and become heated much more rapidly than ordinary pots, EFFECTING thereby a SAVING of more than FIFTY PER CENT. in time, labour, fuel, and waste. The Patent Plumbago Crucible Company also manufacture and import clay crucibles, muffles, portable furnaces, sublimate pans and covers, glass pots, all descriptions of fire-standing goods, and every requisite for the assayer and dentist.

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THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends	Per Share.	Last Paid.
4000	Bedford United (copper), Tavistock†	2 6 8	5⅛	5 5⅛	12 3 6	0 4 0	Mar. 1861
240	Boscean (tin), St. Just†	20 10 0	50		33 0 0	1 10 0	May, 1861
200	Botallack (tin, copper), St. Just	91 5 0	190		443 5 0	2 10 0	Feb. 1860
200	Brynford Hall (lead), Flintshire	12 10 0	26		14 0 0	2 10 0	Oct. 1860
1000	Carn Brea (copper, tin), Illogan†	15 0 0	90	87½ 90	269 10 0	2 0 0	Feb. 1861
2048	Carnyorth (tin), St. Just	3 10 0	3		0 19 6	0 2 0	Sept. 1860
200	Cefn Cwm Brwyno (lead), Cardigansh.	33 0 0	33		9 0 0	4 0 0	April, 1861
50000	Connorree (copper, sulphur) [L. £1]	1 0 0	43s.	39s. 40s.	0 0 9	0 0 9	July, 1860
2450	Cook's Kitchen (copper), Illogan	17 0 9	31⅛	30⅛ 31⅛	0 8 0	0 8 0	May, 1861
12000	Copper Miners of England	25 0 0	25		7½ per cent.		Half-yrly.
350000	Ditto ditto (stock)	100 0 0	24		1 per cent.		Half-yrly.
1055	Craddock Moor (copper), St. Cleer*	8 0 0	27		5 8 0	0 5 0	May, 1861
867	Cwm Erfin (lead) Cardiganshire	7 10 0	16⅛		4 8 0	0 15 0	Mar. 1861
128	Cwmystwith (lead), Cardiganshire*	60 0 0	240		222 10 0	5 0 0	Mar. 1861
280	Derwent Mines (sil.-lead), Durham	300 0 0	180		137 0 0	10 0 0	June, 1860
1024	Devon Gt. Con. (cop.), Tavist.* [S.E.]	1 0 0	370	370 375	753 0 0	7 0 0	May, 1861
358	Dolcoath (copper, tin), Camborne*	128 17 6	510		626 10 0	8 0 0	June, 1861
512	East Basset (cop.), Redruth [S.E.]	29 10 0	97½	87¼ 92½	82 0 0	5 0 0	May, 1861
6144	East Caradon (copper), St. Cleer [S.E.]	2 14 6	28¾	26½ 27	0 7 6	0 5 0	Mar. 1861
300	East Darren (lead), Cardiganshire*	32 0 0	67		75 10 0	1 0 0	April, 1861
2048	East Wheal Lovell (tin), Wendron	2 10 0	—		0 5 0	0 5 0	July, 1859
1400	Eyam Mining Co. (lead), Derbyshire	5 0 0	38		20 3 4	0 10 0	May, 1861
4940	Fowey Consols (copper), Tywardreath	4 0 0	5		41 9 3	0 2 6	June, 1860
2560	Foxdale, Isle of Man, Limited (lead)†	25 0 0	35		61 8 3	1 0 0	Dec. 1860
5000	Frank Mills (lead), Devon	3 18 6	4¼		0 8 0	0 3 0	May, 1861
6000	Great South Tolgus [S.E.], Redruth*	0 14 6	3⅛	3 3⅛	7 13 6	0 5 0	Feb. 1861
1798	Great Wheal Fortune, Breage	18 6 0	14½	13½ 14½	0 10 0	0 10 0	Mar. 1860
5908	Great Wh. Vor (tin, cp.), Helston [S.E.]	40 0 0	6		0 5 0	0 5 0	Mar. 1861
1024	Herodsfoot (ld.), near Liskeard [S.E.]	8 10 0	41	39 41	14 10 0	2 0 0	June, 1861
1000	Hibernian Mine Company	92 6 2	—		6 15 0	0 15 0	Feb. 1861
160	Levant (copper, tin), St. Just	2 10 0	95		1091 0 0	5 0 0	May, 1860
400	Lisburne (lead), Cardiganshire, Wales*	18 15 0	125		370 10 0	3 0 0	April, 1861
9000	Marke Valley (copper), Caradon	4 10 6	9¼	9 9¼	0 16 0	0 5 0	Mar. 1861
5000	Mendip Hills (lead) [L.], Somerset	3 15 0	1⅜		2 1 0	0 2 6	May, 1860
1800	Minera Mining Co. [L.], (ld.), Wrexham	25 0 0	180		71 0 9	4 5 0	May, 1861
20000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	14⅛	14¼	14 0 11	0 4 10	Jan. 1860
640	Mount Pleasant, Mold	4 0 0	25		12 15 7	1 0 0	Mar. 1861
6000	New Birch Tor and Vitifer Consols	1 6 6	2⅛	2 2¼	0 2 6	0 2 6	May, 1861
1366	North Grambler, Redruth	2 7 6	6½		0 10 0	0 10 0	Mar. 1861
6000	North Great Work, Breage	1 3 0	4⅛		0 2 0	0 2 0	May, 1860
5000	Orsedd (lead), Flintshire	0 0 8	1¼		0 6 6	0 0 9	Mar. 1861
6400	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	9	8⅛ 9	35 19 6	0 5 0	Mar. 1861
200	Parys Mines (copper), Anglesey [L.]	50 0 0	—		5 0 0	5 0 0	Jan. 1860
200	Phœnix (copper, tin), Linkinghorne	100 0 0	435		449 10 0	55 0 0	May, 1861
1772	Polberro (tin), St. Agnes	—	5		6 9 6	0 15 0	April, 1861
1120	Providence (tin), Uny Lelant† [S.E.]	10 6 7	41	37 39	59 15 0	1 0 0	May, 1861
16	Rhosesmor	50 0 0	—		1250 0 0	100 0 0	—
512	South Caradon (cop.), St. Cleer* [S.E.]	1 5 0	320	315 320	346 0 0	5 0 0	May, 1861
512	South Tolgus (cop.), Redruth, Cornwall*	8 0 0	41		102 10 0	1 0 0	Mar. 1861
496	South Wheal Frances, Illogan* [S.E.]	18 18 9	137½	137½ 142½	354 5 0	1 0 0	May, 1861
280	Spearne Moor (tin, copper), St. Just	31 17 9	47½		9 15 0	1 0 0	June, 1861
940	St. Ives Consols (tin), St. Ives†	8 0 0	39		484 0 0	0 15 0	May, 1861
9600	Tamar Con. (sil.-ld.), Beeralston [S.E.]	4 10 0	2¼	1½ 2	5 6 0	0 2 6	Jan. 1861
6000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0	5⅛	4¾ 5¼	10 8 6	0 5 0	Feb. 1861
6000	Tolvadden (copper), Marazion	—	2¾		0 13 6	0 3 0	Mar. 1860
572	Trelyon Consols (tin), St. Ives	11 10 0	15		7 0 0	0 10 0	Sept. 1860
200	Trumpet Consols (tin), near Helston	57 10 0	100		46 4 0	0 4 0	Feb. 1861
1024	Wendron Consols (tin), Wendron	11 13 10	21	18 20	8 15 0	1 0 0	Jan. 1861
6000	West Basset (copper), Illogan [S.E.]	1 10 0	18⅛	18⅛ 19⅛	21 10 0	0 8 0	May, 1861
60	West Burton Gill (lead), Yorkshire	50 0 0	—		11 10 0	3 0 0	Oct. 1860
1024	West Caradon (cop.), Liskeard [S.E.]*	5 0 0	56	55 57	96 11 3	2 0 0	May, 1861
256	West Damsel (copper), Gwennap	37 0 0	55		45 0 0	1 0 0	May, 1860
6400	West Fowey Consols (tin and copper)	7 10 0	5	4½ 5	0 14 0	0 2 0	May, 1861
400	W. Wh. Seton (cop.), Camborne [S.E.]*	47 10 0	385	360 365	308 0 0	10 0 0	June, 1861
512	Wheal Basset (copper), Illogan* [S.E.]	5 2 6	95	90 95	570 10 0	2 0 0	June, 1861
256	Wheal Buller (cop.), Redruth* [S.E.]	5 0 0	110	105 110	929 0 0	2 0 0	May, 1861
500	Wheal Clifford (cop.), Gwennap [S.E.]	—	190	182½ 187½	89 10 0	5 0 0	April, 1861
2000	Wheal Falmouth and Sperries	2 5 0	8		0 10 0	0 10 0	Feb. 1861
128	Wheal Friendship (copper), Devon	50 0 0	90		2400 10 0	5 0 0	Feb. 1861
512	Wheal Jane (silver-lead), Kea	3 10 0	18		10 10 0	1 0 0	Feb. 1860
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	1 7 2	11⅛	10 11	8 0 0	0 10 0	Sept. 1860
4800	Wheal Ludcott (lead), St. Ive	2 10 8	3¾	3½ 3¾	1 4 0	0 4 0	Dec. 1860
896	Wh. Margaret (tin), Uny Lel. [S.E.]†	9 17 6	50		68 0 0	1 10 0	May, 1861
100	Wheal Mary (tin), Lelant	36 2 6	440		280 5 0	7 0 0	June, 1860
1024	Wh. Mary Ann (ld.), Menheniot [S.E.]†	8 0 0	13	10 11	53 17 6	0 10 0	June, 1861
80	Wheal Owles, St. Just, Cornwall	70 0 0	300		275 13 0	5 0 0	May, 1861
5000	Wicklow (copper) [L.], Wicklow	5 0 0	64	60 61	41 17 6	2 12 6	Mar. 1861

[* Dividends paid every two months. † Dividends paid every three months.]

MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends	Per Share.	Last Paid.
700	Aberdovey (silver-lead), Merioneth	1 10 0	30		0 10 0	0 10 0	Mar. 1859
5120	Alfred Consols (cop.), Phillack [S.E.]	2 17 1	2	1⅛ 1⅝	20 3 0	0 2 6	April, 1859
1624	Balleswidden (tin), St. Just	11 5 0	12		12 5 0	0 5 0	Jan. 1854
1200	Brightside & Froggatt Grove, Derbysh.	3 0 0	3⅛		3 0 0	3 0 0	April, 1856
2500	Central Minera (lead) [L. £5]	0 15 0	5⅛		0 4 0	0 4 0	Sept. 1859
6000	Charlotte United, Perranuthnoe	2 3 2	21s.	20s. 21s.	0 13 0	0 1 6	Sept. 1859
2000	Collacombe (copper), Lamerton	5 5 0	12		3 5 0	0 8 0	Dec. 1857
256	Condurrow (cop., tin), Camborne	20 0 0	85		85 0 0	2 0 0	June, 1857
256	Copper Hill (copper) Redruth	48 0 0	100	95 100	2 10 0	2 10 0	Sept. 1859
4076	Devon and Cornwall (copper)	4 16 3	6		0 10 0	0 2 6	Feb. 1859
672	Ding Dong (tin), Gulval	37 14 0	12	10 12	16 7 6	1 10 0	Mar. 1857
12800	Drake Walls (tin, copper), Calstock	2 1 0	⅝	⅝ ⅞	0 13 6	0 2 0	Sept. 1857
2048	East Falmouth (sil.-ld.), Kenwyn, Kea	2 10 0	¼		0 7 6	0 2 6	Jan. 1858
128	East Pool (tin, copper), Pool, Illogan	24 5 0	400		305 0 0	2 10 0	Aug. 1858
1024	East Wheal Margaret (tin, copper)	11 17 6	6		0 5 0	0 5 0	Jan. 1854
6000	General Mining Co. for Irel. (cop., ld.)	4 0 0	5¼	5⅜ 5¼	1 0 8	0 3 3	June, 1853
486	Grambler and St. Aubyn (cop.) [S.E.]	47 10 0	16	12 13	23 0 0	1 0 0	July, 1860
119	Great Work (tin), Germoe	100 0 0	110		221 10 0	7 10 0	Feb. 1857
200	Herward United (lead), Flintshire	40 0 0	31		3 0 0	1 10 0	July, 1860
6000	Hingston Down Con. (cop.), Cals. [S.E.]	4 15 6	2¼	2 2⅛	2 16 0	0 2 6	Nov. 1856
5000	Kelly Bray (lead, copper), Callington	4 3 6	1⅛		0 6 0	0 2 0	Feb. 1860
20	Laxey Mining Company, Isle of Man	100 0 0	1200		1420 0 0	50 0 0	June, 1857
470	Newtownards Mining Co., Co. Down	50 0 0	35		56 0 0	1 0 0	Sept. 1858
5000	North Dolcoath (copper), Camborne	2 2 6	⅛		0 5 0	0 2 6	June, 1859
700	North Roskear (copper), Camborne	16 0 0	21		157 0 0	4 0 0	Sept. 1853
1024	Rosewarne and Herland United	11 8 10	⅜		2 10 0	0 10 0	Oct. 1859
512	Rosewarne United (cop., tin), Gwinear	18 6 4	25	21 23	33 10 0	1 0 0	Sept. 1860
12000	Sortridge Con. (cop.), Whitchurch [S.E.]	0 16 0	9s.	⅝ ¾	0 10 0	0 2 6	July, 1857
128	South Crinnis (copper), St. Austell	19 0 0	285		60 0 0	20 0 0	June, 1855
20000	St. Day United (tin and cop.), Redruth	2 5 0	¾		0 3 6	0 1 0	Feb. 1858
400	United Mines (copper), Gwennap	55 0 0	35	38 40	80 5 0	2 10 0	April, 1860
20000	Vale of Towy (lead), Carmarthen [S.E.]	0 13 6	⅜	6s. 7s.	0 5 9	0 1 0	July, 1858
1024	West Providence (tin), St. Erth	14 15 0	3¾		33 1 9	0 10 0	April, 1857
240	Wheal Bal (tin), St. Just	15 0 0	16		4 0 0	1 0 0	Feb. 1859
4096	Wheal Edward (cop.), Calstock [S.E.]	7 7 6	2¼	2 2¼	0 5 0	0 5 0	Mar. 1858
1024	Wheal Grylls (tin), Perranuthnoe	1 4 0	4		1 12 0	0 7 6	Nov. 1859
5000	Wheal Kitty (tin), St. Agnes	4 12 6	1		0 18 6	0 2 0	July, 1860
430	Wheal Lovel (tin), Wendron	33 0 0	7		31 0 0	1 0 0	Sept. 1856
1024	Wheal Margery (tin, copper)	15 13 0	7½		0 10 0	0 10 0	May, 1860
396	Wheal Seton (tin, copper), Camborne	58 10 0	70	67½ 72½	131 15 0	1 10 0	Dec. 1859
1040	Wh. Trelawny (sil.-ld.), Liskeard [S.E.]	5 17 0	15¼	14¾ 15¼	43 15 0	1 0 0	Oct. 1860
1022	Wheal Tremayne (tin, cop.), Gwinear	12 12 6	5		10 2 6	0 7 6	Jan. 1854
4096	Wheal Wrey Consols (lead), St. Ive	3 1 6	¾		2 12 6	0 2 6	Dec. 1857

FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends	Per Share.	Last Paid.
2464	Burra Burra (cop.), South Australia	5 0 0	132		260 0 0	5 0 0	Feb. 1861
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	41	39 41	96 12 0	2 0 0	Jan. 1861
10000	Copiapo Mining Company, Chili [S.E.]	16 0 0	9	6 8	6 8 0	0 5 0	Jan. 1861
15000	East Indian Coal, Calcutta [L.]	10 0 0	10		7¼ per cent.		Yearly.
70000	English and Australian [S.E.]	5 0 0	3⅛		1 2 6	0 5 0	Feb. 1861
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	25		17 5 0	0 15 0	Jan. 1861
68000	Kapunda Mining Co., Australia [S.E.]	1 0 0	2⅛		0 6 0	0 2 0	Dec. 1860
15000	Linares (ld.), Pozo Ancho, Spain [S.E.]	3 0 0	8⅛	8 8⅛	8 2 10	0 6 8	Mar. 1861
10000	Lusitanian (of Portugal) [S.E.]	2 0 0	2		0 17 3	0 2 6	Aug. 1860
103815	Mariquita and New Granada [S.E.]	1 0 0	⅛		0 9 6	0 1 6	July, 1859
100000	Port Phillip (gold), Clunes [S.E.]	1 0 0	⅝		0 3 0	0 1 0	Jan. 1860
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	35⅛	34⅛ 35⅛	40 15 0	2 0 0	Dec. 1860
20000	West Canada Mining Company [L.]	1 0 0	1⅜		0 2 0	0 2 0	June, 1860

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends	Per Share.	Last Paid.
10000	Alten and Quænangen Uni. (cop.) [L. £5]	4 10 0	3		4 5 0	0 15 0	Nov. 1853
10000	Gt. Barrier Land, Min., &c., N.Ze. [L. £5]	4 0 0	3⅛		15 per cent.		May, 1859
10000	Pontgibaud (sil.-lead), France [S.E.]	20 0 0	5		1 0 0	1 0 0	June, 1855
43174	Unit. Mexican (sil.), Mexico [S.E.] Av.	28 5 0	5⅛	5⅛ 6	1 16 6	0 4 0	Feb. 1853

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
[illegible]	Australian (copper), South Australia [S.E.]	7 7 6	1¼		Sept. 1858
75000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	0 17 6	⅜	1⅛ 1¼	Dec. 1860
6000	Central American (silver) [L.]	5 0 0	8½		Feb. 1859
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	—		Jan. 1859
60000	Clarendon Consols (copper), Jamaica [S.E.]	0 17 6	⅜		Jan. 1861
10000	Copiapo Smelting [L.], Chili	10 0 0	8⅛		Fully paid.
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	⅞	⅝ ⅞	Fully paid.
30000	East Kongsberg Native Silver Mining Co. of Norway [L. £5]	1 0 0	¾		April, 1861
30000	Ellerslie and Bardowie, Jamaica	0 18 0	1⅛		July, 1859
8000	English and Canadian Mining Company [L.]	5 0 0	—		Fully paid.
25000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	3		Fully paid.
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	1 0 0	1¼	1⅛ 1¼	
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	—		Fully paid.
50000	Imperial Thessalian (lead, &c.), Thessaly [L. £2]	0 10 0	¾		June, 1860
30000	Lagunazo (sulphur, copper), Portugal [L. £1]	0 10 0	⅛		May, 1861
60000	New Granada (gold), South America [S.E.]	1 0 0	¼		Fully paid.
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	1 0 0	1		Nov. 1858
60000	North Rhine Copper of South Australia [L. £1] [S.E.]	0 12 6	⅜		June, 1860
15000	Pachuca Silver Mining Company, Mexico [L. £1]	0 10 0	1⅛		April, 1861
80000	Scottish Australian Mining Company [L. £1]	0 10 0	⅜		Nov. 1858
15000	South Europe Mining Company, Spain [L. £5]	3 0 0	—		May, 1860
50000	St. John's United (copper, lead), Newfoundland [L. £1]	0 10 0	⅝		Mar. 1860
25000	Victor Emanuel, Val d'Ossola, Piedmont [L.]	1 0 0	1⅛		Fully paid.
1000	Western Africa Malachite (copper) [L.]	110 0 0	—		Oct. 1859
12000	Wheal Ellen, South Australia [L. £5]	2 10 0	2¾		Nov. 1860
35425	Wheal Jamaica (copper)	1 0 0	18s.		Fully paid.
80000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	¾	⅝ ¾	Fully paid.

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4825	Abbey Consols (ld.) Cardigan.	2 7 0	1		Nov. 1860
1000	Allt-y-Crib (lead)	1 5 0	2		
4000	Allt-y-Maen (lead) [L. £1]	0 5 0	12s.		July, 1859
10000	Angarrack (copper), Phillack	1 1 6	1⅛		June, 1859
1000	Ashburton United (cop., tin)	11 10 0	16		Mar. 1860
10000	Bampfylde (copper), Devon	0 15 0	4		Aug. 1860
4000	Bedford Consols (copper)	1 18 6	4s.	3s. 4s.	April, 1861
4000	Beneathwood (lead), Linkin.	1 14 6	12s.		Nov. 1860
2000	Berehaven (copper), Ireland	1 0 0	1¼		
7500	Bickleigh Vale Phœnix [L.]	2 0 0	2⅛		Fully paid.
200	Billins (lead) [L. £30]	20 0 0	21	20 21	Feb. 1861
10000	Borlase Con. (tin), St. Just [L.]	1 0 0	1⅛		Fully paid.
1248	Boscaswell (tin), Penzance	6 5 0	8		Dec. 1860
2280	Boscundle (tin, cp.), St. Austell	6 15 0	4		Sept. 1860
160	Bosorne & Bollowall, St. Just	6 5 0	10		Dec. 1860
123	Bosweddan and Wheal Castle	32 0 0	—		Nov. 1858
5000	Bosworthan (tin), Sancreed	1 0 0	1⅛		June, 1860
5000	Bottle Hill (tin), Plympton	1 0 0	1		
12000	Brea Con. (tin), St. Ives [L. 30s.]	1 0 0	1⅛		Jan. 1861
5000	Bronfloyd (ld.), Cardigan. [L.]	2 0 0	3⅛		June, 1861
4000	Brookwood	1 5 0	3½		Mar. 1861
1200	Brynfelin [L.] [600 £1, 600 £5 pd.]		—		April, 1861
500	Bryn Gwiog (lead), Flint	4 0 0	36	33 34	Oct. 1859
2000	Bryntail, Llanidloes, Montgo.	5 2 0	4⅛	3 4	Mar. 1861
5850	Budnick Consols (tin), Perran	0 15 0	22s.	1 1⅛	Feb. 1861
6380	Buller and Basset Unit. (cop.)	3 2 6	1⅛		Mar. 1861
1200	Buller and Bertha (copper)	5 10 0	2⅛		Feb. 1861
2448	Bwlch (sil.-ld), Cardiganshire	4 9 0	1⅛		Nov. 1860
4096	Calstock Consols (copper)	5 10 0	⅜	¼ ⅛	Dec. 1860
915	Calvadnack, Wendron	18 5 0	5	5 5½	Mar. 1861
1000	Camborne Consols (copper)	16 0 0	8		Aug. 1860
4600	Camborne Vean & Wh. Francis	7 7 4	2⅛	1¾ 2	May, 1861
914	Caradon Cons. (cop.), St. Cleer	21 12 0	8⅛	7½ 8½	June, 1861
1000	Cardigan Consols [L. £10]	7 0 0	9		Feb. 1860
916	Cargoll (silver-lead), Newlyn	15 5 7	16	15 16	Sept. 1860
6000	Carn Camborne	0 7 0	1⅛	1 1⅛	May, 1861
4370	Carnewas (ld., cop.), Mawgan	0 18 0	¾		May, 1860
3000	Carn Vivian (tin, cop., lead)	1 19 6	2⅛		April, 1861
7000	Carrack Dews	2 16 0	1		April, 1861
1056	Carvannall (cop.), Gwennap	21 11 7	3		Dec. 1860
10000	Carway and Duffryn [L.]	5 0 0	5		Fully paid.
20000	Carysfort (cop., ld.) [L. £2½]	0 10 0	9s.	11s. 12s.	Mar. 1859
25000	Casara (lead), Carma. [L. £1]	0 8 0	12s.	11s. 12s.	Dec. 1860
10000	Castleward, Ireland [L. £1]	0 10 0	15s6d.		
2500	Cefn Cilcen (lead), Flintshire	1 5 0	¾		Sept. 1860
2000	Clara (silver-lead) [L. £4]	3 17 6	2⅛		Oct. 1860
984	Clijah & Wentworth (tin, cp.)	27 0 6	2⅛	2	Jan. 1861
6000	Clinton and Edgecombe United	1 0 0	1⅛		Oct. 1860
3135	Coed Mawr Pool (lead) [L.]	4 3 0	4		July, 1860
5000	Cornubia (tin), Roche	0 15 0	1		April, 1861
10000	Craigton (ld.) [L. £1], Kirkcud.	0 10 0	¾		June, 1859
906	Crane (copper), Camborne	6 10 0	6	6 6⅛	April, 1861
30000	Craven Moor (ld.), Yorkshire	0 10 0	¼	4s.	No call.
12000	Crelake (cop.), Tavistock	—	3		No call.
8000	Crookhaven (cop.) [L. £2⅛]	0 17 0	9s.		Mar. 1861
2000	Crowlwm (lead), Llanidloes	1 10 0	⅞		No call.
6000	Crowndale (cop.), Tavistock	0 11 0	3		Nov. 1858
6000	Cuddra (cop., tin), St. Austell	1 16 0	2¼	2 2¼	May, 1861
4000	Cumberland Black-Lead [L.]	5 0 0	6¼		Fully paid.
7000	Cwm Afon (cp.), Festi. [L. £1]	0 19 0	—		Dec. 1860
21000	Dale, North Staffordshire [L.]	1 0 0	1		Fully paid.
4817	Devon and Courtenay (cop.)	1 9 0	11s.		Mar. 1861
5000	Devon Great Wheal Ellen	2 0 0	—		Mar. 1861
12000	Dev. New Copper Co. [L. £2]	—	2		
12000	Devon Union (copper) [L. £1]	0 10 0	¾		Dec. 1860
4566	Devon Wheal Buller (copper)	3 9 0	¾		May, 1861
1000	Durlo (tin), Lelant	6 12 0	8		Mar. 1861
2000	Dolcoath United [L. £5]	1 0 0	2¾		June, 1860
2048	Dulta (tin), St. Stephen's [L. £1]	0 12 6	3		April, 1861
3000	Dyfngwm (lead), Wales	12 6 6	9⅛		Sept. 1858
244	Eaglebrook (lead.), Cardigan	75 10 0	14		June, 1861
4096	East Alfred Consols (copper)	3 12 3	—	28s.	May, 1861
6000	East Budnick and Mount	0 10 0	11s.	½	Jan. 1861
6000	East Carn Brea (cop.) Redruth	3 1 0	8	7¾ 8	April, 1861
6400	East Crinnis and South Par	2 7 6	2		May, 1861
4000	East Devon Gt. Consols (cop.)	0 10 6	2½	2 2¼	June, 1861
4000	East Fowey (cop.) [L. 50s.]	1 5 0	—	1¼ 1½	June, 1861
6000	E. Grenville (cop.), Camborne	0 14 6	46s.	43s. 45s.	April, 1861
4000	E. Gunnis Lake & S. Bedf. (cp.)	5 9 6	⅞		Mar. 1861
8000	East Polberro, St. Agnes	0 5 0	—	½	May, 1861
4096	E. Providence (tin), Uny Lel.	2 1 5	1⅜		Mar. 1861
6000	E. Releath (tin, cop.), Wendron	0 1 0	1		Aug. 1860
5000	E. Rosewarne (cp., tin), Gwin.	2 10 0	1⅜		May, 1860
1122	East Seton, Camborne	0 2 0	—		May, 1861
256	East Tolgus (copper), Redruth	56 0 0	40		Feb. 1861
1000	E. Trefusis (cop.), Gwennap	6 18 10	3⅛	3 3⅛	Dec. 1859
1024	E. Treskerby (cop.), Redruth	3 0 0	2¼	2 2¼	Mar. 1861
1190	E. Wheal Agar (cop.), St. Cleer	8 2 0	2⅛		Jan. 1861
6000	E. Wh. Ellen (sil.-ld.), St. Ive	0 1 0	⅜		July, 1860
4000	E. Wh. Russell, Tavis. [S.E.]	7 4 0	4¼	4 4¼	Nov. 1859
5700	Exmouth (sil.-ld.), Christow	5 10 6	⅝	1⅛ 1¼	May, 1861
6000	Fowey and Par Uni., St. Blazey	0 10 0	1⅛		Nov. 1860
5000	Fursdon (cp.), Okeham. [L. 30s.]	1 5 0	2⅛		Aug. 1860
6000	Furze Hill Wood Cons., Buckl.	0 4 0	14s.		April, 1861
114	Garden (tin), Morvah	16 0 0	18		Mar. 1861
1000	Garreg (lead), Flint	4 5 6	⅛		Mar. 1861
4000	Gawton (copper), Tavistock	1 12 0	⅛		June, 1861
6000	Gernick (copper), Crowan	0 10 0	⅛		June, 1861
4892	Goginan (silv.-ld.) [1900 £12½, 2992 £1]		2		July, 1860
6144	Gonamena (copper), St. Cleer	2 10 0	2⅛	2 2⅛	Mar. 1861
2000	Goonzion, St. Neot	0 2 6	4s.		Feb. 1861
5000	Great Brigan	2 10 0	2⅛		Mar. 1861
4096	Great Caradon (cop.), St. Ive	1 8 0	¾	¾	May, 1861
6000	Gt. Crinnis (cop.), St. Austell	2 0 0	1¼	1 1¼	Feb. 1861
10000	Great Moelwyn Slate [L. £5]	1 10 0	—		Mar. 1861
4000	Gt. No. Tolgus (cop)., Redruth	2 7 6	2⅝		May, 1861
10104	Great Onslow Cons., Camelfd.	3 10 9	¾		Dec. 1860
6000	Gt. Retallack (sil.-ld., blende)	1 7 0	26s.	1⅛ 1¼	June, 1860
40000	Gt. Tregune Consols, Altarnun	0 10 0	¼		
10000	Great Treveddoe (copper)	0 13 0	1		Mar. 1861
6000	Gt. Tywarnhaile (cp.), [L. £5]	3 0 0	3		Jan. 1861
5120	Great Wheal Alfred [S.E.]	13 18 2	⅝	10s. 12s.	April, 1861
3730	Great Wheal Baddern (tin)	4 11 0	⅞		Mar. 1861
6000	Gt. Wh. Busy (cop., tin), Ken.	13 0 0	3½		Mar. 1861
10000	Great Wh. Martha (cop.) [L.]	1 0 0	18s.	19s. 21s.	Fully paid.
10240	Gunnis Lake (Clitters' Adit)	0 2 0	3¼		Mar. 1861
5000	Gurlyn (cop., tin), St. Erth	1 10 0	8s.		June, 1861
8634	Gwydyr Park Con., Llanrwst	0 14 9	9s.		Jan. 1860
6400	Harwood (ld.), Durham [L. £1]	0 3 0	⅜		April, 1860
7219	Hawkmoor (tin, cop.) Calstock	2 17 6	1		Mar. 1861
5000	Holmbush (ld., cp.) Callington	5 2 0	2¾	2½ 2¾	Sept. 1860
6000	Huckworthy Bridge (copper)	0 16 6	¼		Mar. 1861
40	Imperial Silver-Lead, Dolgelly	25 0 0	30		Mar. 1861
6000	Keswick (lead), Portinscale	4 16 0	1⅛		June, 1860
6000	Lady Bertha (cop.) [S.E.]	1 10 6	24s.	21s. 23s.	April, 1861
3000	Lady Eliza (ld.), Carm. [L. £3]	2 6 0	⅛		Nov. 1860
1019	Leeds & St. Aubyn (tin, cop.)	15 12 3	4		Mar. 1861
963	Lelant Cons. (tin), Uny Lelant	32 10 0	2⅛		Mar. 1861
1000	Llanfair (silver-lead) [L.]	6 0 0	5		Fully paid.
8000	Llywernog United, Card. [L.]	1 16 0	1⅛		July, 1859
500	Long Rake	10 0 0	11	10 11	May, 1861
2000	Lower Park Denbighshire [L.]	4 0 0	—		
4968	Maudlin Mines [2484 £6, 2484 £1 pd.]		2⅛		
4540	Merilyn (lead), Flint	3 10 6	16s.	14s. 16s.	May, 1861
22000	Merryfield (lead) [L.]	0 12 0	¼		May, 1860
3400	Michell (lead), Flint	—	9s.	8s. 9s.	Mar. 1861
1024	Mill Pool (tin, cop.) St. Hilary	15 9 6	1		Aug. 1859
16000	Mold (lead), Flints. [L. £1]	0 17 0	⅞		Jan. 1860
6599	Molland (cop.), S. Moulton	2 6 0	2s.		Jan. 1861
5000	Nance Valley	0 5 0	1		Aug. 1860
1024	Nangiles (tin, copper), Kea	3 0 0	6		Jan. 1861
5000	Nanteos and Penrhiw [L. £4]	3 0 0	2⅛		Sept. 1860
2400	Nant-y-Iago (ld.), Merioneth	3 0 0	2½		Mar. 1861
250	Nanty Mines (ld.), Montgom.	20 0 0	—		Fully paid.
6400	Nether Heath (lead), Dufton	0 15 6	⅛		April, 1860
6400	N. Crow Hill (ld.), St. Stephen	1 18 6	1¼		Feb. 1861
6000	N.E. Bertha Con. (cp.), Tavis.	0 13 0	1⅛		Dec. 1860
6000	New Treleigh Cons., Redruth	1 8 0	2¼	2⅛ 2¼	Feb. 1861
2000	New Wheal Clifford (copper)	0 6 0	¼		Mar. 1861
6144	New Wheal Francis, Crowan	0 16 6	12s.		May, 1861
1024	New Wheal Hender, Crowan	2 5 0	3		Mar. 1861
400	New Wh. Seton (cop.), Camb.	13 10 0	57½		May, 1861
2300	New Wh. Vor & E. Wh. Metal	8 10 0	—		April, 1861
2500	N. Wh. Vaddon (cop.), Marazion	0 13 0	1¼		Dec. 1860
6000	Nidderdale (ld.), Yorks. [L. £1]	0 15 0	¾		Jan. 1861
90	N. Budnick (tin, ld.), Perranz.	1 10 0	40		No call.
4500	No. Budnick and West Mount	0 5 0	⅜		
1024	North Buller (cop.), Redruth	20 2 6	5½	5 5½	Feb. 1861
6000	Nor. Clifford (cop.), Gwennap	0 5 0	⅝		Nov. 1860
20000	North Devon (sil.-ld.) [L. £1]	0 7 0	8s.		April, 1861
6000	North Downs (cop.), Redruth	2 3 4	4⅛	4⅛ 4⅜	Aug. 1859
5792	No. Downs and Wh. Rose Uni.	1 18 0	1⅜		April, 1861
2500	North Frances, (cop.) [S.E.]	12 15 0	4¼	4½ 5	Feb. 1861
8000	N. Hallenbeagle (tin, cp.) [L.]	0 7 6	2¼		April, 1861
2000	North Jane (tin, silver-lead)	2 10 0	2¾		Mar. 1861
6000	N. Laxey (ld.) I. of Man [3600 £2, 2400 £1½]		1⅛		Aug. 1860
2000	N. Levant (tin, cop.), St. Just	6 12 6	6		Aug. 1860
10000	North Minera (lead) [L.]	1 0 0	33s.	30s. 32s.	April, 1860
5000	N. Nant-y-Mwyn (ld.), [L. 10s.]	0 5 0	⅜		Jan. 1861
4096	North Rosewarne, Gwinear	0 4 6	4s. 6d.		Dec. 1860
5000	N. T[illegible]lether (sil., cp.), Padstow	1 0 0	1⅛		Feb. 1860
848	N. Treskerby (cop.), St. Agnes	10 3 9	24½	23 24	Dec. 1860
6000	N. Wh. Basset (cop., tin) [S.E.]	1 11 0	5⅛		April, 1861
1024	North Wheal Busy (cop., &c.)	8 10 5	4		Feb. 1861
1122	North Wheal Crofty [S.E.]	9 14 0	7½	7 7½	May, 1861
4000	N. Wh. Exmouth (cop., lead)	2 5 0	—		May, 1861
2000	North Wheal Prospidnick	0 6 0	¾		Nov. 1860
5000	N. Wh. Providence (tin, cop.)	0 12 6	1⅝		May, 1861
6144	N. Wh. Robert, Samp. Spiney	2 10 0	13s.	14s. 16s.	Aug. 1857
4108	North Wheal Trelawny (lead)	2 19 6	¼		April, 1861
4000	N. Wrey (ld.), St. Ive [L. £2]	0 9 6	¾		May, 1861
4096	Okel Tor (lead), Calstock	5 1 6	2⅛		Sept. 1860
600	Old Tolgus United (cop.) Redr.	39 18 0	12	11 12	May, 1861
800	Pant-y-Buarth (ld.) [L. £10]	6 0 0	20		Mar. 1861
200	Pant-y-Pwydu (ld.), Flintshire	10 0 0	20		Sept. 1860
8465	Pedn-an-drea United (tin)	3 2 6	18s.		Mar. 1861
3200	Pelyn Wood (cop.), Lostwithiel	2 7 6	⅛		May, 1861
5000	Pendeen Consols, St. Just	3 12 0	5¾	5¼ 5¾	Aug. 1860
1000	Pengenna (ld., sil.), St. Kew	4 10 0	6¾		May, 1861
512	Penhaldarva (lead)	16 0 0	15		Oct. 1860
800	Penhale Moor (tin, copper)	3 0 0	5¾		Feb. 1861
5000	Penhalls (tin), St. Ann's	1 4 0	5		Jan. 1860
4800	Penhauger (lead), Menheniot	0 9 0	4s.		April, 1861
6000	Penrait (lead), Merioneth	2 0 0	2¼		
200	Pentre Lygan (lead) [L. £30]	20 0 0	22		Mar. 1861
6000	Penvivian, Lanivet, Cornwall	—	¼		No call.
4000	Polgear Mines, Wendron	0 15 0	⅞	¾ ⅞	Feb. 1861
6000	Polhigey Moor (tin), Wendron	1 0 0	1¼		Jan. 1861
1004	Praed Consols (tin), Lelant	3 0 0	2⅛		May, 1861
6400	Prideaux Wood (tin, cop.)	3 12 0	16s.		May, 1861
512	Polbreen (tin), St. Agnes	8 0 0	12		Aug. 1860
6000	Prosper Uni. (tin, cp.), St. Hilary	1 0 0	¾		June, 1860
6000	Portlemouth Consols, Devon	0 6 3	—		Nov. 1860
11789	Redmoor (cop., tin), Callington	0 8 0	4s.		May, 1861
6000	Releath (tin, cop.), Crowan	1 0 0	2¼		Oct. 1860
2500	Rhoswydol and Bacheiddon	12 0 0	7⅛		
3000	Rhyscog (silver-lead) [L. £5]	1 0 0	1		Mar. 1861
15000	Ribden (lead), Alton [L.]	1 0 0	1¼		Fully paid.
10000	River Tamar Copper [L.]	0 10 0	⅛		Sept. 1858
6000	Rosewall Hill & Ransom Utd.	2 16 0	1⅛		Mar. 1861
4096	Rosewarne Consols (copper)	3 2 6	5		May, 1861
5000	Round Hill (cop., ld.), Salop	2 5 6	22s.		Mar. 1858
2000	Scorrier Con. (tin, cp.), St. Agnes	1 10 0	1⅛		Jan. 1861
10000	Sigford Con. (cop., tin) [L. £1]	0 11 0	¾		Dec. 1860
5000	Silver Bank (sil.-ld.) [L. £1]	0 15 0	¾		Oct. 1859
100	Silver Rake (lead) [L. £20]	5 0 0	20		Jan. 1861
15000	Silv. Vein, St. Winnow [L. £1]	0 5 0	2½		April, 1860
512	South Basset (cop.), Gwennap	11 0 8	14		Feb. 1861
100	South Bryn Gwiog	5 0 0	25	20 25	
6400	So. Buller & W. Penstruthal	0 12 0	1¼		May, 1860
4096	S. Caradon Wh. Hooper (cop.)	2 3 6	¾		April, 1861
6000	So. Carn Brea (cop.) [S.E.]	5 2 0	3⅛	3⅛ 3⅜	May, 1861
6138	S. Condurrow (tin, cp.), Camb.	1 16 6	1		Mar. 1861
2283	Sou. Crenver (cop.), Crowan	9 13 6	3¼		Oct. 1860
6000	South Darren (ld.) [L. £3¼]	2 5 0	1⅛		April, 1860
65000	S. Dev. Iron & Gen. Min. [L. £1] [S.E.]		⅞		Fully paid.
1024	South Ding Dong, Gulval	0 10 0	¾		Aug. 1860
6000	S. Dolcoath & Carnarthen Con.	2 2 0	4		Feb. 1861
6000	South Gernick (tin), Crowan	0 2 6	⅜		Oct. 1860
1000	South Gorland	6 0 0	6	5 6	Aug. 1860
1024	So. Herodsfoot (ld.), Liskeard	1 2 6	1¾		Aug. 1859
6000	South Lady Bertha (copper)	0 19 6	⅝		Mar. 1861
4000	South Minera [L. £5¼]	1 12 0	3¼		Mar. 1861
5537	So. Phœnix (cop.) Linkin.	4 10 0	1¾		Jan. 1859
1024	South Treasavean, Gwennap	2 1 6	1⅛		April, 1861
25	S. Wendron Con. (tin), Wendron	25 0 0	—		
4096	S. Wh. Betsy, Mary Tavy, Dv.	1 4 6	1		June, 1861
1105	So. Wh. Crofty (cop.), Illogan	2 18 10	4		May, 1861
1024	S. Wh. Ellen (cp.), St. Agnes	9 10 8	1		Nov. 1859
1000	South Wh. Kitty (tin), Lelant	1 0 0	1¾		May, 1861
6000	S. Wh. Leisure (cop.), Perran	0 1 0	⅛		April, 1861
1024	S. Wh. Lovell (tin), Wendron	0 17 0	2½		Mar. 1861
2048	Sou. Wh. Margaret (tin, cop.)	0 10 0	1		April, 1861
400	So. Wh. Seton (cop.), Camborne	24 3 0	19		April, 1861
794	Spearne Cons. (tin), St. Just	6 7 0	3¼		Mar. 1860
970	St. Aubyn and Grylls (cp., tin)	7 14 6	2½		Aug. 1860
5208	St. Austell Consols (tin, &c.)	3 16 0	1¼		Dec. 1858
1024	St. Ives Wheal Allen (tin)	4 10 0	6		Feb. 1861
1000	Stencoose and Mawla (tin, cp.)	2 0 0	2		April, 1861
920	Stray Park (cop., tin) [S.E.]	24 8 0	36	34 36	Oct. 1860
5000	Tavy Con. (cop.), near Tavis.	5 10 0	1¼		Dec. 1860
3000	Tees Side (ld.), Cumberland	3 18 0	7s.		Jan. 1861
6000	Tolcarne (cop.), Camborne	1 5 6	3	3	Jan. 1861
2000	Trefulack Uni. (tin), St. Enoder	2 10 0	3		April, 1861
6000	Tregardock (lead), St. Teath	0 12 0	1¼		April, 1860
2000	Tregullow Consols (tin, cop.)	0 5 0	1¾		Nov. 1860
5000	Treloweth (copper), St. Erth	5 18 8	4	3⅜ 3⅝	Dec. 1860
1024	Trencrom (tin), Uny Lelant	10 5 0	2¾		June, 1861
5000	Tresellyn and Scaddick Cons.	1 5 6	—		Mar. 1861
8000	Tretoil (copper, tin)	2 7 6	1⅛		Jan. 1861
5600	Trevenen and Tremenheere	5 9 0	2½		Feb. 1861
1024	Trevoole, Crowan, Cornwall	21 16 2	8½	8	May, 1861
4096	Treweatha (sil.-ld.), Menhen.	4 6 0	½		Feb. 1861
2048	Treworlis, Wendron	1 10 0	2		Mar. 1859
4000	Trumpet Unit. (tin), Wendron	0 10 6	14s.		April, 1861
3000	Tyne Head (ld., cop.) [L. £1]	0 12 0	¾		Sept. 1860
1024	Tyringham Consols (tin)	1 10 0	2¾		Feb. 1860
5000	United Mines (cp., &c.), Tav.	4 9 6	1⅛	1 1¼	May, 1861
1250	Vale of Ffrith (lead) [L. £2]	0 5 0	1½		April, 1861
1000	Waenlas (ld.), Denbigh [L. £10]	8 0 0	5		Aug. 1859
3000	Watermouth Gt. Sil.-Lead [L.]	5 0 0	6		Fully paid.
4000	Wentnor [L. £2⅛]	1 10 0	1	2¼	April, 1861
1024	W. Alfred (copper), Phillack	36 16 5	—		Sept. 1859
100	W. Bryn Gwiog (ld.) [L. £20]	5 0 0	36	33 35	Jan. 1861
1218	W. Condurrow (tin, cop.), Cam.	4 7 2	6		Mar. 1861
16	West Denbigh (ld.), Denbigh	35 0 0	50		Oct. 1860
30000	W. Devon Con. (cop.), [L. £1]	0 7 6	¼		Feb. 1860
4620	W. Great Work (tin), Germoe	0 8 0	11s.		Mar. 1861
25000	West Par Con. (cp.) St. Blazey	1 8 6	¼		Sept. 1860
6000	W. Polmear (tin, cp.), St. Austell	0 10 0	21s.	20s. 22s.	Feb. 1861
1000	W. Rose Down (cop.), Caradon	3 0 0	12	11 12	Aug. 1860
256	West Sharp Tor (cp.) Rillaton	129 0 0	35		June, 1861
5000	W. Snailbeach (lead) [L. £2]	1 0 0	1¼		July, 1860
4096	West South Caradon (copper)	1 14 0	2½		May, 1861
1056	West Stray Park (cop.), Camb.	7 15 0	5		April, 1861
5000	West Tolcarne (cop.), Crowan	1 11 6	⅝		April, 1861
512	West Tolgus (cop.), Redruth	16 0 0	—		May, 1861
5120	West Tolvadden (cop., tin)	0 15 0	—		Mar. 1861
1879	West Trevelyan (tin, copper)	8 5 0	3¾		May, 1861
4000	West Wendron (tin), Wendron	0 13 0	13s.		Mar. 1861
512	West Wheal Frances, Illogan	63 15 0	18		April, 1861
10000	West Wheal Jane (tin, &c.)	2 12 6	¾		Jan. 1859
1024	West Wheal Lovell, Wendron	1 0 0	1		Oct. 1860
3000	W. Wh. Margaret (tin), Uny Lel.	2 8 0	⅞		April, 1861
6000	Wheal Agar (copper), Illogan	3 4 0	4		June, 1861
2048	Wh. Agnes (silv.-ld), St. Kew	—	2		No call.
1024	Wh. Anna (ld., blende), Perranz.	0 8 6	⅜		Feb. 1861
500	Wheal Anne (tin), St. Austell	0 16 0	1⅛		May, 1861
5000	Wheal Annie (cop.), Gwinear	0 15 0	¾		No call.
5990	Wh. Arthur (cop.), Calstock	3 9 0	¾	10s. 12s.	
1000	Wheal Basset and Grylls (tin)	4 0 0	6⅛		Mar. 1861
3000	Wheal Conquer (tin, copper)	1 0 0	1½		Sept. 1860
6000	Wheal Crebor (cop.), Tavistock	0 15 0	½	⅝ ¾	May, 1861
5120	Wheal Cupid (cop.), Redruth	3 13 0	1⅛		Feb. 1861
512	Wh. Damsel (cp., tin), Gwennap	20 0 0	11		Feb. 1861
4000	Wh. Emma (cp) Buckfastleigh	2 12 6	4		Jan. 1860
4096	Wheal Emma (tin), Breage	0 10 0	¾		Aug. 1860
720	Wheal Franco, near Tavistock	22 10 0	5⅛		Sept. 1859
6000	Wh. Grenville (copper) [S.E.]	7 2 0	2⅛	2¼ 2⅛	May, 1861
5120	Wheal Harriett, Camborne	4 0 0	2	1¾ 2	Sept. 1860
6000	Wh. Harris (ld., cop.), Lifton	0 10 6	1		Feb. 1861
1024	Wheal Hearle, St. Just	7 10 0	15		Sept. 1860
6000	Wh. Henry, Helvn. (lead) [L.]	1 0 0	1		Fully paid.
512	Wheal Hendra (tin), Breage	1 12 6	2¼		April, 1861
10000	Wh. Lopes (tin, zinc) [L. £1]	0 10 0	—		Feb. 1860
100	Wheal Louisa (cop.), Redruth	10 0 0	120		No call.
5640	Wh. Mary Emma (tin) Lydford	0 10 3	—		April, 1861
6000	Wheal Moyle, Gwennap	2 0 0	2⅜	2¼ 2⅜	Aug. 1860
5000	Wheal Nelson	0 10 0	—		
6000	Wh. Norris (tin, cp.), St. Cleer	1 4 0	28s.	34s. 36s.	June, 1861
256	Wheal Polmear, St. Austell	17 10 0	220	190 210	
2315	Wh. Pollard (cop.), St. Neot's	2 3 0	⅛		April, 1861
1000	Wh. Prosper (cp., tin), Breage	7 10 0	3		April, 1861
1879	Wheal Prospidnick	1 11 0	5¼		Feb. 1861
240	Wh. Reeth (tin), Uny Lelant	62 10 0	60		Mar. 1861
600	Wheal Rose (ld.), St. Columb	1 0 0	6		No call.
1024	Wh. Sicily (sil.-ld.), Broadoak	2 10 0	3		April, 1861
4096	Wheal Sidney (tin), Plympton	3 7 1	1⅝	1½ 1⅝	April, 1861
2048	Wh. Sithney & Carnmeal Uni.	4 10 0	3		Mar. 1861
1024	Wheal St. Andrew (copper)	5 0 0	5		Jan. 1860
512	Wheal Trannack, Sithney	2 0 0	—		Mar. 1861
512	Wh. Trefusis (cop.) Gwennap	26 5 0	3		Aug. 1859
6000	Wheal Union (cop.), Redruth	3 0 0	3⅜	3 3¼	April, 1861
6000	Wh. Unity (cop., tin), Gwinear	10 12 6	1	18s. 20s.	May, 1861
4096	Wh. Uny (tin, cop.), Redruth	7 19 6	4⅛	3⅞ 4⅛	Mar. 1861
1024	Wheal Vyvyan (copper)	0 10 0	—		Dec. 1860
6000	Wheal Welcome (tin, copper)	1 0 0	4½		April, 1859
6400	Whitford (lead), Holywell	10 16 6	—		May, 1860
5000	Willow Bank (lead) [L.]	2 3 0	4s.		April, 1861
1024	Worvas Downs (tin), Lelant	3 0 0	4⅛		Mar. 1861
4096	Wrey Consols, Buckfastleigh	0 8 0	⅜		Dec. 1860
3170	Yarner (copper), Devon	2 7 6	2		Mar. 1861

*** Those mines with [S. E.] appended have been admitted on the Stock Exchange. Those mines with [L.] appended have been incorporated with Limited Liability.

*** Our object being to make the Share List correct, we earnestly call upon all who have the power, to aid us, by forwarding any alterations or correction which may, from time to time, come under their notice. To shareholders, as well as those officially connected with the mines, we appeal for information. Reports from mines—in fact, mining intelligence of every description, forwarded to our office, will meet ready attention.

London: Printed by Richard Middleton, and published by Henry English (the proprietors), at their office, No. 26, Fleet Street, where all communications are requested to be addressed.—*June* 15, 1861.